Journal
of the AMERICAN PHARMACEUTICAL ASSOCIATION

NOVEMBER
1957
V. 18, #11

Practical Pharmacy Edition

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Dr. W. Paul Briggs, 1957 Remington Honor Medalist, *see page 667*

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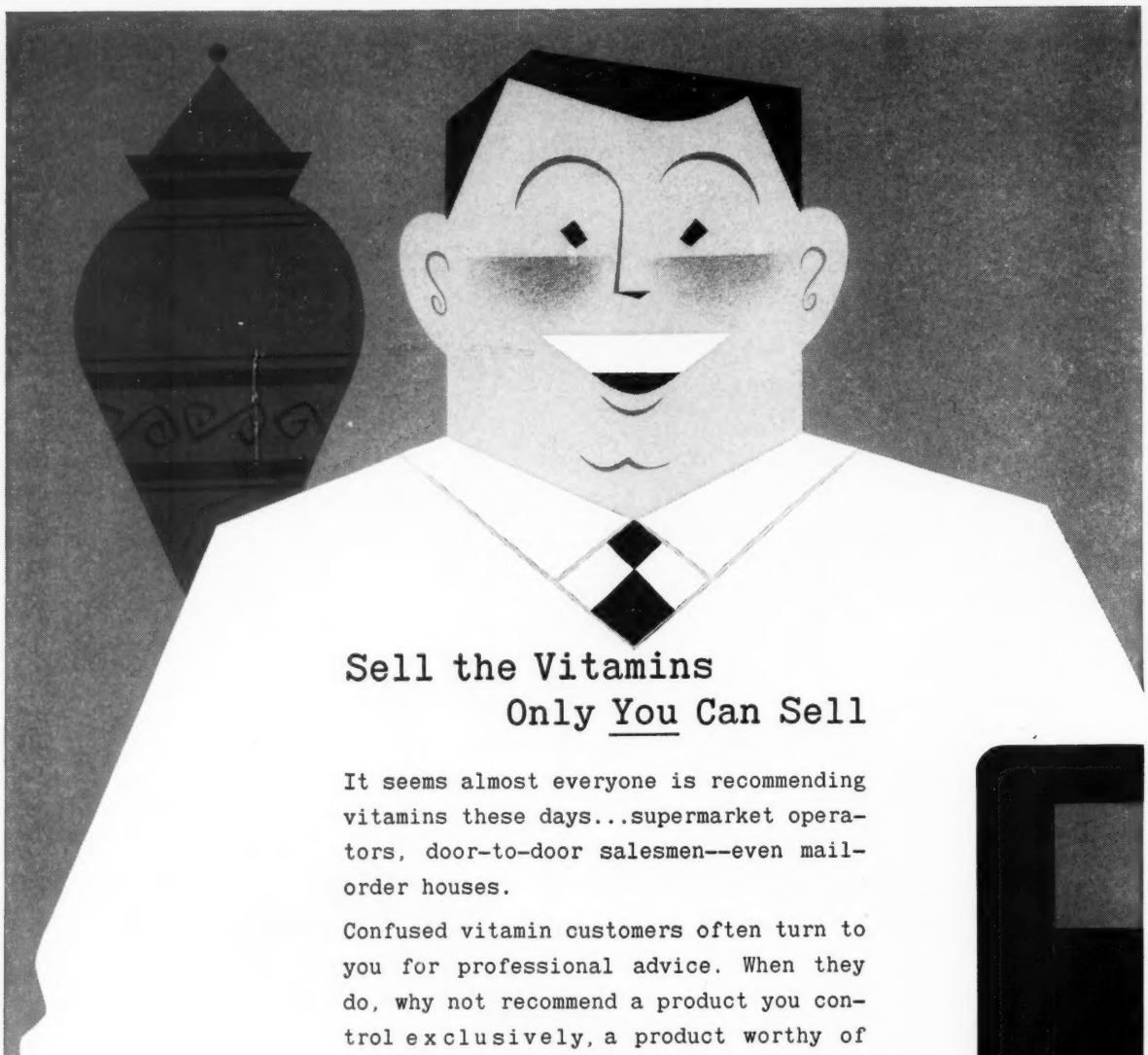

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Practical Pharmacy Edition

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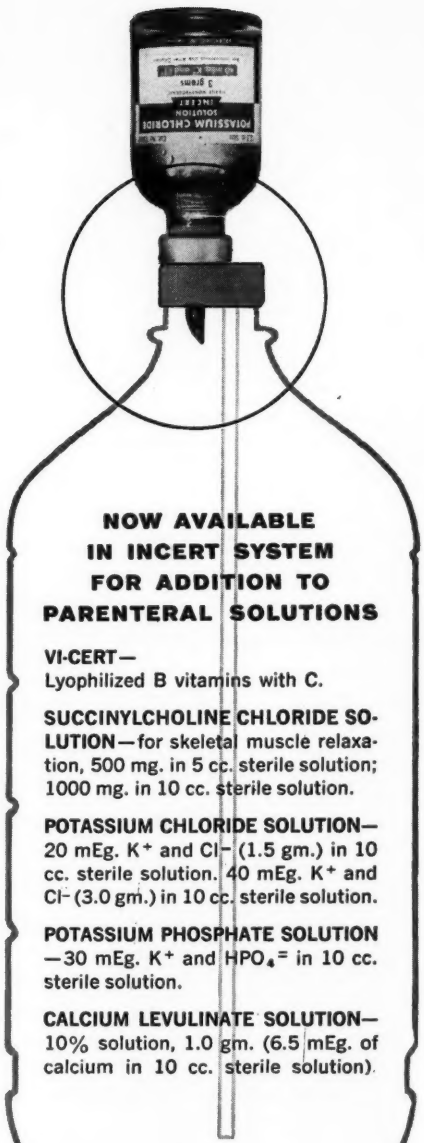

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WASHINGTON VIEWS

The priority question that must be answered by every physician when he injects Asian influenza vaccine is: ''Am I protecting the life of a patient afflicted with heart disease, diabetes, or some other chronic ailment, for whom contraction of influenza may be of serious consequences, or am I protecting a vigorous, healthy individual because he may be temporarily prevented from administering an essential industrial or government operation?'' During periods of short supply of urgently-needed preventive medication, the physician's first objective is to preserve life, but what about our national security? This depends upon continuous functioning of our complex economy with the aid of healthy individuals more than upon the helpless young and feeble aged. The question then becomes: ''Which is more important, the individual or our country?''

Healthy minds and bodies trained to highest levels of performance plus the courage and rational thinking of dynamic, impartial, inspiring leaders are needed by the Western democracies more urgently than ever in the global struggle for a free world. Russia is planning world domination through mass production of scientific manpower and use of psychological warfare. Even forgetting Sputnik and the fact that the world's largest atom smasher (10-Bev) is in Russia, recent data are startling: 63,000 Russian graduates in engineering annually versus 23,000 in the U.S.; total number of scientists of equivalent stature almost equal to that in the U.S.; 73 medical schools with 140,000 students in Russia compared with 76 in this country with about 28,000 students.

Overriding factors currently controlling the American scene are: expanding population, vast economic growth, mobility of personnel, rising aspirations of man everywhere, rising demand for education, and increasing recognition of interdependence, according to speakers at the recent 2-day annual meeting of the American Council on Education held at Washington, D.C.

Our population during the next 100 years will grow to 500,000,000, according to recent estimates, and this country will begin to run out of space for its citizens.

Throughout the hospitals of the world, there is epidemic spread, through person-to-person contact, of antibiotic-resistant Staphylococcus aureus type 42B/52/81, which causes respiratory and skin infections, according to reports from the American College of Surgeons.

In spite of our urgings to the contrary, a few drug manufacturers have begun promoting their products on the basis that they are effective in preventing Asian influenza even though the only known preventative is a vaccine. The Federal Trade Commission is taking appropriate action but not before a dark shadow has been cast over the entire profession of Pharmacy. Misleading the public through such false and dishonest promotion of drugs is vicious, reprehensible, and repugnant to all upright persons. Some of the executives involved, unfortunately, have been top-flight leaders in both Pharmacy and Medicine.

LAST MINUTE NEWS

The influenza pandemic has girdled the world in a year and since it first struck the United States in June of this year has developed into an epidemic which reached every section of the nation by the beginning of October.

In 112 of the largest U.S. cities, the number of deaths from influenza and pneumonia has increased 50%. The death rate from influenza in New York City rose during October to a high of about 4 a day. Both type A′ and type B influenza infections have been demonstrated in some individuals, and total infections number in the millions.

Although statements are being made that Asian influenza vaccine is less effective than predicted, no one can say at this time that the antibody levels produced in the blood are unsatisfactorily low. In any event, it is better to have reasonably good protection rather than none at all.

The Public Health Service has considered the possibility of using 0.1 cc. intracutaneously but after careful study still recommends the 1 cc. dose subcutaneously of flu vaccine.

Asian influenza vaccine is now being released at the rate of more than 7,000,000 cc. per week.

During the first 9 months of 1955, which includes the polio season, there were about 8,000 paralytic poliomyelitis cases. After administering the Salk vaccine for 2 years, an 80% drop in these cases was reported by Marion B. Folsom, Secretary of Health, Education, and Welfare. Only some 1,600 paralytic poliomyelitis cases were reported during the first 9 months of 1957. The disease can be virtually eliminated if Americans under 40 will take the vaccine during the next year.

Out of a total U.S. population of 109,000,000 persons under 40, in the highest priority group of 67,000,000 (under 20 years of age and expectant mothers) only 25,000,000 have received all 3 injections, 22,000,000 have received 2 injections, 11,000,000 have received 1 injection, and 9,000,000 have received no vaccine. Of the 42,000,000 persons in the group 20 to 39 years old, 3,000,000 have been vaccinated with 3 doses, 5,000,000 with 2 doses, and 6,000,000 with 1 dose; 28,000,000 adults have had no vaccine.

80% of Medicare patients are female.

Asian influenza vaccine will soon be double the present strength.

An export quota of 5,000,000 cc. of Salk Vaccine has been established for the fourth quarter of 1957.

A nation-wide survey of severe reactions to antibiotics reported by Henry Welch at the Fifth Annual Symposium on Antibiotics shows an increase in the incidence of the reactions to these drugs. More than 1,000 life-threatening reactions occur annually. More than 900 of these were due to penicillin, 72 of which resulted in death.

In some patients, dramatic relief from penicillin reactions was obtained with penicillinase, according to R. M. Becker, M.D., who says the 200 to 300 deaths from penicillin reactions predicted for this year possibly could be obviated by the use of the enzyme intravenously.

Resistance studies performed in the hospital do not indicate promiscuous use of antibiotics in the private physician's practice, according to R. S. Griffith, M.D., and his colleagues from the Lilly Research Laboratories also reporting at the antibiotic symposium.

Administration of oxytetracycline and tetracycline to patients in the Philippine General Hospital suffering with influenza decreased the length of illness and the incidence of bronchiopneumonia, according to Angel Florentin of PGH.

The Public Health Service now recommends that BCG tuberculosis vaccine be used *only* in groups where exposure to the disease is unusually high and where other means of control are inadequate.

At the present attack rate, of the 55,000,000 persons in the U.S. infected with the tuberculosis bacillus, 2,750,000 will have the disease in an active form during their lifetime. Some 80,000 cases costing $725,000,000 are reported annually. BCG vaccine is ineffective in persons already infected.

Factors influencing your chances of being a heart disease victim are partly hereditary, but your weight, blood cholesterol level, blood pressure, and amount of cigarette smoking are important, according to Drs. Paul D. White, Samuel A. Levine, Frederick J. Stare, and Howard B. Sprague.

New findings make it medically unjustifiable to recommend therapeutic abortions for women who contract German measles early in pregnancy. Children born to these women will be normal about 9 times out of 10, according to physicians of New York City and New York State Departments of Health.

On all school levels in this country, we now have a fourth of the nation in school, according to John A. Perkins, Under Secretary of Health, Education, and Welfare.

Some 142,000 persons, about 7% of all Federal employees, are engaged in research and development activities.

According to Aims C. McGuinness, M.D., of HEW, the U.S. will spend about $330,000,000 for medical research this year, more than half of which comes from the Federal Government.

The $222,000,000 appropriated by the U.S. Government for medical research for the current fiscal year is far more than the combined total for the ethical drug industry, philanthropic institutions, universities, and colleges.

Some 300,000 persons are now sheltered in 25,000 nursing homes across the nation at a cost of $550,000,000 per year. It would be interesting to know how the drugs, particularly those which should be distributed only on prescription, are being handled in these institutions.

For fiscal year 1957, a total of 71,570 persons were rehabilitated through the State-Federal vocational rehabilitation program, a new record. Some 71,000 rehabilitated men and women will add 109,000,000 man-hours to the nation's production potential, and increase their earnings nearly $120,000,000.

Meprobamate accounted for about $24,700,000 of the $41,835,609 total sales of Carter Products, Inc., which also manufactures Little Liver Pills, Arrid deodorant, Nair depilatory, and Rise pressurized shaving cream.

The annual accidental death toll in the U.S. has remained fairly constant at about 100,000 since 1932. In addition, some 9,500 injuries last year caused financial losses of over $11,200,000,000.

Dr. Daniel Bovet was awarded the 1957 Nobel Prize for Medicine for his work in antihistamines.

More than $100,000,000 is now spent annually in administering the four public welfare programs for the aged, the blind, the totally and permanently disabled, and dependent children. Total expenditure, shared by the Federal and State Governments, on a matching funds arrangement is now $1,700,000,000.

A trend is evident in the Sun Ray Drug Company's plans to add 45 new drug supermarkets to its 160 drug stores during the next 15 months.

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NEWS and NOTES

ASSOCIATIONS

American Association for the Advancement of Science—The Pharmacy Section program for the AAAS meeting being held in Indianapolis, Ind., Dec. 26–30, has been arranged by *Robert C. Anderson*, Eli Lilly and Company; *George F. Archambault*, USPHS; *John E. Christian*, Purdue University; *Joseph A. Oddis*, AHA; and *Glen J. Sperandio* of Purdue; with *Karl L. Kaufman* of Butler University serving as the Local Program Advisor. Nine sessions have been arranged consisting of the symposia "A Pharmacological Approach to Mental Illness," and "Recent Trends in Medications," sessions for contributed papers, and a field trip to Eli Lilly and Company. Cosponsors of the program are the Scientific Section, APhA, AACP, ASHP, ACA, and NABP.

American Council on Education held its 40th annual meeting in Washington, D.C., Oct. 10–11. The meeting theme "Articulation—a consideration of desirable relationships among levels and types of education to ensure better education for the individual student, now and in the coming years" was discussed in its many aspects by a group of prominent educators.

Georgia Pharmaceutical Association recently conducted an essay contest open to high school seniors and junior college students, as part of its observance of National Pharmacy Week. The winner, to be announced about Nov. 30, will receive a $200 scholarship to aid him in his first year at pharmacy school, according to *Pres. William L. Berry*.

New Jersey Pharmaceutical Association dedicated its observance of National Pharmacy Week to the New Jersey Mental Health Association, thereby focusing public attention to the need for a better understanding of mental illness.

Plant Science Seminar—The 34th annual Seminar, held at the University of Montreal, included an interesting program of scientific papers, reports concerning research in pharmacognosy, a panel discussion, tours, and field trips. *Dr. Ross M. Baxter* of the Montreal Faculty of Pharmacy served as Local Chairman. The welcoming committee included *Dean Alfred Larose*, University of Montreal; *John Richard*, President of the Canadian Pharmaceutical Association; and *Dr. George Walker* of the University of Toronto Faculty of Pharmacy. The 1958 Seminar will be held at Ferris Institute (*see Oct. issue, p. 577*).

New officers elected for 1957–58 include: *Arthur Schwarting* of Storrs, Conn., Chairman; *Edson F. Woodward* of New York City, 1st Vice Chairman; *Mrs. Mary Anderson* of Detroit, Mich., 2nd Vice Chairman; and *Frank L. Mercer* of St. Louis, Mo., Secretary-Treasurer.

Rho Chi Society has inaugurated its new "Rho Chi Chapter Award." The program provides for a cash award of $250 to be given the chapter making the most substantial contribution to the encouragement of qualified undergraduate students to pursue graduate training in Pharmacy. In competing for the award, Chapters will submit written reports on their activities to a special judging committee. Members of this committee, appointed by *Dean Roy A. Bowers* of Rutgers University, President of Rho Chi, are *Dr. Milton L. Neuroth* of the Medical College of Virginia, Chairman; *Dr. George L. Webster*, University of Illinois; and *Dr. W. Lewis Nobles* of the University of Mississippi. Announcement of the winning Chapter will be made at the Spring 1958 Convention.

TEXAS PHARMACEUTICAL ASSOCIATION has elected G. B. Park of Dallas as its incoming President. New officers (l to r) are T. H. Cleveland of Dublin, Director; W. F. Brooks, Sr., of Denton, 2nd Vice-President; Mr. Park; Edd A. Robinson of Abilene, 1st Vice-President; Elmer J. Lunz of Hebbronville and John Halsey of Lubbock, Directors of the Association.

Texas Pharmaceutical Association—*Dr. Joseph B. Burt*, President of APhA, was among the participants in the 78th annual convention program of the Association held in Dallas, Aug. 11–14. According to *C. J. M. Roesch*, Executive Secretary, the Dallas meeting was a very successful one with over 1200 registrants in attendance.

COLLEGES

Amarillo College on Sept. 25–26 was the scene of the Panhandle Pharmacy Management Conference. A group conference on professional management and talks by *G. B. Park*, President of the Texas Pharmaceutical Association; *Walter Cousins, Jr.*, Secretary of the Texas State Board of Pharmacy; *Dr. F. V. Lofgren*, Associate Professor of Pharmacy, and *Dr. Charles O. Wilson*, Professor of Pharmaceutical Chemistry, both of the University of Texas, were the highlights of this stimulating meeting.

Brooklyn College of Pharmacy has appointed *Dr. Herman C. Nolen*, President of McKesson & Robbins, Professor of Pharmacy Administration in the new Graduate Division. According to *Dr. Arthur G. Zupko*, Dean of the College, the appointment of Dr. Nolen, an authority on drug marketing and sales management, is in accordance with the new graduate department's policy of obtaining leaders in the pharmaceutical world to serve as faculty members.

PUERTO RICO PHARMACEUTICAL ASSOCIATION newly elected Board of Directors are shown as former President Esteban Amador hands the mallet to the new President, Dr. Esteban Núñez Meléndez, Associate Professor of Pharmacognosy, University of Puerto Rico and a Vice-Chairman of the recent Pan American Congress. Other members are (l to r) Juan A. González Amador, Diodo Leduc, Francisco Sosa Pérez, Carmen Gloria Fernández, Lydia A. Miranda Rivera, Executive Secretary, Luis E. Toro, 1st Vice-President, Herbert Massari, Treasurer, Abigail Robles, Mildred Reyes, Ana Luisa Díaz, Secretary, Horacio Tous, 2nd Vice-President, Luis A. Vázquez, Nelson Torres, and Raphet Rosado. Not shown are William Quiles, Luis J. Anglade, and José A. Vega Capriles.

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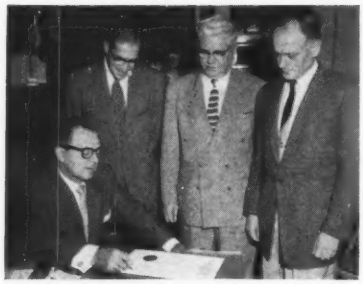

NATIONAL PHARMACY WEEK IN IOWA. Shown (l to r, standing) are D. L. Bruner, Executive Secretary of the Iowa Pharmaceutical Association; John R. Rabe, Secretary of the Iowa Board of Pharmacy Examiners; and John P. Carr, President of the Des Moines Pharmaceutical Association, looking on as Governor Loveless signs the Proclamation.

Fordham University College of Pharmacy—*Dr. Louis N. Elowe* has been appointed Associate Professor of Pharmacy and will develop the College's first separate course in Physical Pharmacy. Formerly a member of the University of Toronto faculty, Dr. Elowe received his postgraduate training at the University of Wisconsin. On Feb. 1, *Paul Buday* will join the faculty as Assistant Professor in Biological Sciences.

Rutgers University—This fall marks the 30th anniversary of the merger of the former New Jersey College of Pharmacy with Rutgers University. Since Sept. 1927, nearly 2,000 students have graduated from the College of Pharmacy. The original 3-year undergraduate course by 1960 will have become a 5-year program; and within the last 4 years the College has tripled the seating capacity of its 16,000 volume library and added new pharmacology, dispensing and research laboratories. . . . *Sylvio Sappia*, Vice President of Bergen Drug Company in Hackensack, N.J., recently donated biological testing equipment valued at $1,000 to the College.

State University of Iowa—At the Annual Pharmacy Seminar, held Nov. 8–9, papers were presented by *Dr. Wayburn S. Jeter, Dr. James W. Jones, Dr. Larry M. Wheeler, Frank Li Puma, Dr. Keith A. McNurlen, Professor H. P. Baumann,* and *Dean Louis C. Zopf* of the College of Pharmacy.

Temple University College of Pharmacy—Pharmacists can increase their stature in the eyes of the public if they will render "personal professional service" to their customers, *Henry S. McNeil,* President of McNeil Laboratories, told students at a recent convocation address. "Doctors repeatedly point out, in print as well as directly to their patients, that their diagnostic skill is an essential part of therapeutic procedure. Because we in pharmacy are deprived of this argument, we now bear the brunt of the public's inconsistent sense of values" he said. A concerted effort to "sell" the professional aspects of pharmacy is necessary to reverse this trend, according to Mr. McNeil.

University of Texas—The College of Pharmacy has awarded its first Ph.D. to *Mrs. Esther Jane Wood Hall,* Assistant Professor of Pharmacy Administration. . . *Dr. Er Hung Djao,* author of papers in THIS JOURNAL, *Sci. Ed.,* and formerly Assistant Professor of Pharmacognosy and Organic Chemistry, Detroit Institute of Technology, has been appointed Assistant Professor of Pharmacognosy.

GOVERNMENT

Department of the Army—*Lt. Col. William L. Austin,* Consultant in Pharmacy to the Army Surgeon General, recently attended the meetings of the International Pharmaceutical Association and the 15th International Congress of Military Medicine and Pharmacy held in Yugoslavia.

Food and Drug Administration recently proposed regulatory changes to provide more informative and precise identification of habit-forming drugs. No addition or deletion of currently listed drugs would be made. In the future, the use of trade or proprietary names would be discontinued; these would be listed separately. The regulations would include all the official titles of habit-forming drugs appearing in drug compendia.

National Institutes of Health—*Dr. C. Jelleff Carr,* formerly Professor of Pharmacology, Purdue University, has joined the Psychopharmacology Service Center of the National Institute of Mental Health. . . . *Dr. Richard L. Masland* has been made Assistant Director of the National Institute of Neurological Diseases and Blindness. Prior to his new appointment, he had been Professor of Neurology and Psychiatry and head of the neurology program at the Bowman Gray School of Medicine.

Office of Defense Mobilization—*Dr. W. Palmer Dearing* has been appointed to the newly created post of Assistant Director for Health. Dr. Dearing, a PHS career officer since 1934, had served as the Deputy Surgeon General of the Public Health Service for the past 9 years. The new position which he recently assumed has been established to provide for better coordination of all the health activities of the Federal Government.

Public Health Service—*Surgeon General Leroy E. Burney* has announced the appointment of *Dr. John D. Porterfield* as Deputy Surgeon General to fill the post held by the new ODM officer, *Dr. W. Palmer Dearing.* Dr. Porterfield, who had been Assistant Surgeon General, is a career officer of the PHS, and had been on the faculties of Ohio State University College of Medicine, the University of Michigan School of Public Health, and the Cincinnati College of Medicine.

U.S. Civil Service Commission has reissued its announcement of the Federal Service Entrance Examination for qualified young people wishing a career in the Federal Government. Among the training positions available are ones in food and drug inspection, investigation, procurement and supply, and information. Announcements and additional details of the positions, with starting salaries of $3,670 to $4,525, are available at regional Civil Service Offices and Post Offices.

HOSPITALS

American Hospital Association held its 59th annual convention in Atlantic City, N.J., Sept. 30–Oct. 3. *Ray Amberg,* Director of the University of Minnesota Hospitals, Minneapolis, was named President-Elect. *John N. Hatfield,* Director of Passavant Memorial Hospital in Chicago, was made Treasurer of the Association. Mr. Amberg, who will take office at the 1958 convention, has been Superintendent and Director of the University of Minnesota Hospitals since

AHA CONVENTION Delegates have named Pharmacist Ray Amberg (l) as President-Elect; Joseph A. Oddis (ctr) arranged round table sessions at convention (see story, this page); PRESBYTERIAN-ST. LUKE'S HOSPITAL has appointed Louis Gdalman (r) its new Hospital Director.

One of the important ways

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. . . by constant research and development of new products to meet the physician's needs and to benefit his patients. Here are representative products developed in recent years which are sending prescriptions to your store—

OBEDRIN®

to curb appetite and establish desired eating patterns.

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ADRENOSEM® Salicylate

the unique systemic hemostat which controls capillary bleeding.

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prednisone-salicylate combination for treatment of the severe phase of rheumatic disease.

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cortisone-salicylate therapy for a wide range of rheumatic disorders.

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peptonized iron, palatable, well-tolerated, most effective in iron-deficiency states.

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1935 and also serves as Professor of Hospital Administration, School of Public Health, University of Minnesota. He received his Ph.C. degree in pharmacy from Minnesota in 1920 and first became associated with the Hospital in 1921. Long active in the AHA, he has also served as Regent and Vice-President of the American College of Hospital Administrators.

A series of round table sessions on hospital pharmacy were included in the recent AHA convention program. These included "Pharmacy Service in the Smaller Hospital," "Providing Pharmaceutical Services After Normal Pharmacy Hours," and "Formulary Systems in Hospitals." The sessions provided an excellent opportunity for pharmacists and hospital administrators to discuss these timely subjects. *Joseph A. Oddis*, formerly Chief Pharmacist, Western Pennsylvania Hospital in Pittsburgh, Pa., and now AHA's Hospital Pharmacy Staff Representative arranged the round table sessions. Chairmen of the sessions included *George A. Archambault*, Washington Chief, Pharmacy Branch, USPHS; *Joe Vance*, Administrator, South Highlands Infirmary, Birmingham, Ala.; and *Robert R. Cadmus*, M.D., Director, North Carolina Memorial Hospital, The University of North Carolina.

INDUSTRY

Bristol-Myers Company—On the occasion of its 70th anniversary, *Lee H. Bristol, Sr.*, President, presented the Smithsonian Institution of Washington, D.C. with a collection of rare, antique drug jars. *George B. Griffenhagen*, Curator of the Smithsonian's Division of Medicine and Public Health, accepted the collection at the recent anniversary luncheon held in New York. Now on exhibiton at the Smithsonian, the Bristol-Myers collection includes a unique Persian albarello of the 13th century.

Burroughs Wellcome & Co.—*Edwin C. Abrahamsen*, Vice President and Plant Manager, recently retired after 26 years' service with the company. The former Production Manager, *Charles H. Pressel*, has been named Plant Manager.

Crookes-Barnes Laboratories—*William E. Widerkehr*, formerly regional sales supervisor for Warner-Chilcott Laboratories, has been named Sales Manager. . . . *Russell F. Flynn*, with a background of 10 years' experience in the field, has been made Assistant Manager of Sales Training.

NATIONAL WHOLESALE DRUGGISTS' ASSOCIATION held its 83rd annual meeting in Miami, Fla., Oct. 26–31. Members of the Business Program Committee who met with Chairman Boone Gross, President of Gillette Safety Razor Co., are (l to r) Dan Rennick, American Druggist; H. C. Van Arsdale, Smith, Kline & French; John Hunsicker, Curtis Publishing Co.; Carl F. G. Meyer, Meyer Bros. Drug. Co.; Norman R. Williams, Jr., NWDA; John Sandberg, J. Walter Thompson Co.; J. O. Peckham, A. C. Neilson; Harry A. Kimbriel, NWDA; Maxwell James, Lederle Laboratories; Mr. Gross; Richard L. Hanson, McKesson & Robbins; James E. Allen, Henry B. Gilpin Co.; Roy V. Schwab, Brunswig Drug Co.; Cloyd Cypher, Burroughs-Wellcome Co.; Albert B. Fisher, Jr., NWDA; and Louis E. Kazin, Drug Trade News-Drug Topics.

Denver Chemical Mfg. Co.—*Howard S. Tierney, Jr.*, President, recently announced that arrangements had been completed for the acquisition of the Philadelphia pharmaceutical concern, Henry K. Wampole & Company. For the present the two organizations will continue to function as separate units.

Otis E. Glidden & Co.—*A. S. Griffith*, formerly Vice-President of J. B. Roerig & Co., has been elected company President; and *William C. Glidden*, Vice-President. The manufacturers of Zymenol are planning a new sales promotion program to be handled by *Milton G. Peterson*. . . . *Robert F. Ruzicka* has been appointed technical director in charge of new product development.

Merck & Co. has announced the appointment of *John J. Horan* as Director of Public Relations. *Thomas E. Jennings*, who formerly held this position, is in the newly created position of Public Relations Counsel. Mr. Horan joined Merck's Legal Department in 1952 and has been Counsel to Merck S&D since 1955.

AUSTRALIAN VISITORS visit Johnson & Johnson's Microbiology Laboratory; (l to r) Dr. William H. Lycan, Director of Research for J&J; Eric Scott and Robert Ross of the Federated Pharmaceutical Service Guild of Australia *(see story on FPSG visitors, page 648.)*

Dr. Ernest Peter Pick, well-known pharmacologist, was recently the recipient of the Schmiedeberg Award at presentation ceremonies held at the Merck Institute for Therapeutic Research. Dr. Pick, now in his 86th year, has been associated with the Merck Institute since coming to the U.S. in 1939. He had been a member of the medical faculty of the University of Vienna for 34 years and had served there as Director of the Pharmacologic Institute. Presiding at the ceremonies was *Dr. Hans Molitor*, Chairman of the Board of Trustees of the Institute and former pupil and colleague of Dr. Pick's at Vienna. The Schmiedeberg Award was presented to Dr. Pick on behalf of the German Pharmacological Society by *Dr. Otto Krayer*, Department of Pharmacology, Harvard Medical School. The Award, which memorializes Johann Ernest Oswald Schmiedeberg (1838–1921), generally acknowledged as the "father of pharmacology," has been given only once previously.

E. L. Patch Company—*Professor Robert A. Walsh* was recently elected to the Board of Directors, according to an announcement by *Fred A. Lawson*, President. Professor Walsh, formerly on the faculty of the Massachusetts College of Pharmacy, will remain active there as Professorial Lecturer in Professional Relations and Public Health. He has been affiliated with the Patch Company since 1944 and, in June 1953, gave up teaching to become Director of Research and Product Development. As a member of

SKF offers a useful new dosage form of 'Compazine'

*Compazine** SUPPOSITORIES

5 mg. (for children) **25 mg.** (for adults)

for control of nausea and vomiting from widely varying causes

- when oral dosage of 'Compazine' is impossible
- when intramuscular administration is impracticable

Particularly suitable for pediatric use

In clinical trials in 150 children under 12 years of age, good to excellent results were achieved in controlling nausea and vomiting in 91% of the cases.

And in adults, 'Compazine' Suppositories control nausea and vomiting from such widely varying causes as gastroenteritis, radiation therapy, nitrogen mustards therapy, cancer and pregnancy.

Available:	Package Size	Suggested Price to Retailers
'Compazine' Suppositories, 5 mg. (for children)	Boxes of 6	$1.23 box
'Compazine' Suppositories, 25 mg. (for adults)	Boxes of 6	1.53 box

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Introducing:

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Robaxin®

(Methocarbamol Robins, U. S. Pat. No. 2770649)

for skeletal muscle relaxation

Robaxin for superior relief

ROBAXIN—an entirely new drug—was synthesized in the Robins Research Laboratories, and has been exhaustively studied for five years. It ushers in a new era in skeletal muscle relaxation for the physician—and *a new era in prescription business in this category for you.*

Note the significant advantages of ROBAXIN:

- **Highly potent—and long acting**
- **Virtually free of adverse side effects**
- **Does not reduce normal muscle strength or reflex activity**
- **Beneficial in 94.4% of cases tested**

The ROBAXIN story is being hammered home to the physicians in your area this month through intensive promotion; and a heavy demand for this new skeletal muscle relaxant is inevitable.

But don't *you* relax! Prepare for it right now with an ample stock.

INDICATIONS: Acute back pain associated with: (a) muscle spasm secondary to sprain; (b) muscle spasm due to trauma; (c) muscle spasm due to nerve irritation; (d) muscle spasm secondary to discogenic disease and postoperative orthopedic procedures; and miscellaneous conditions, such as bursitis, fibrositis, torticollis, etc.

HOW SUPPLIED: ROBAXIN Tablets (white, scored), each containing 0.5 Gm. methocarbamol. Bottles of 50 and 500.

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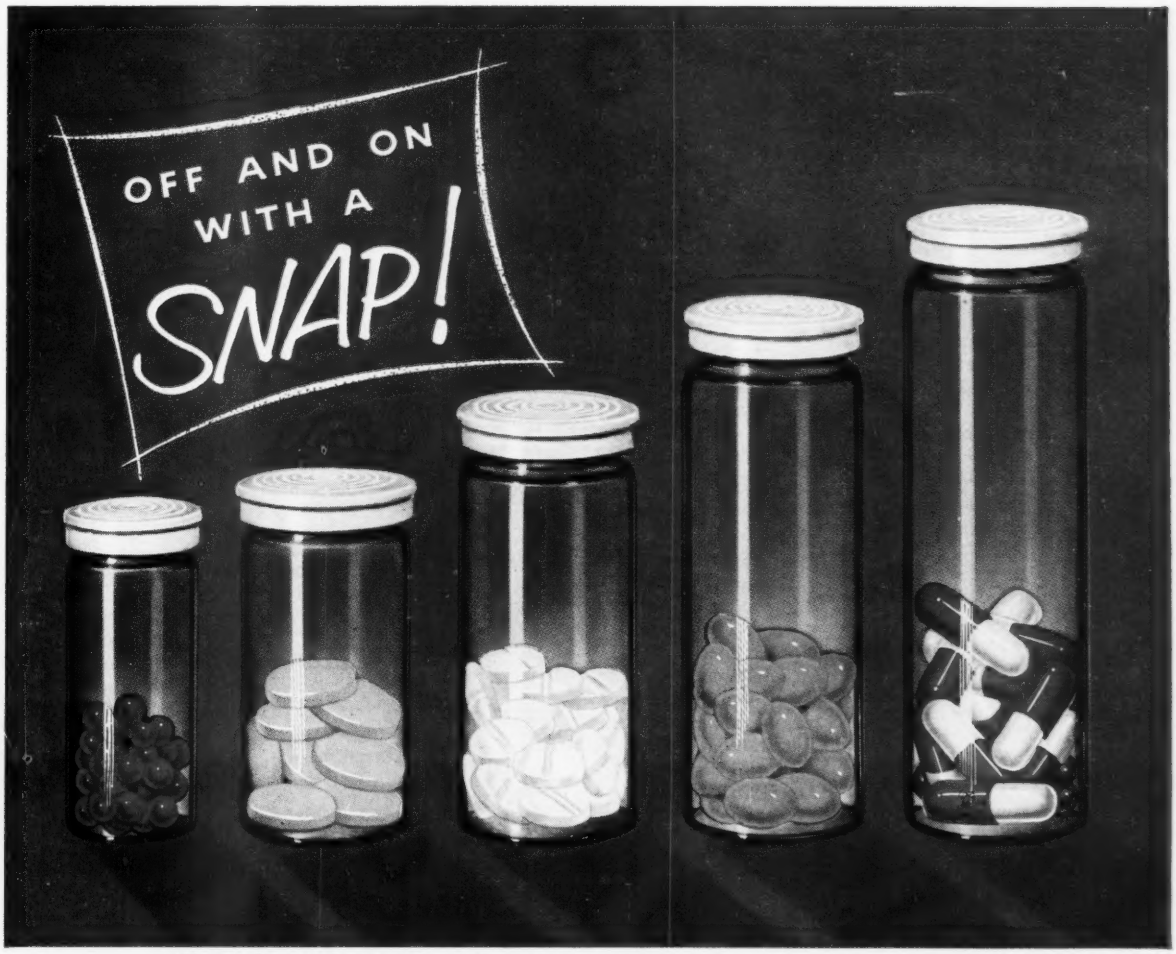

New Kimble Opticlear Snap-Cap Vials provide perfect visibility of contents, can be labelled either inside or outside . . . available in five sizes: 3, 5, 7, 10 and 12 drams.

Note that the special, resilient polyethylene cap fits on the outside, providing more room for contents.

Skyrocketing demands prove the great economy ...extra convenience of

KIMBLE OPTICLEAR SNAP-CAP VIALS

Ordinarily, it takes some time for a new product to "catch on." Not so with Kimble Opticlear Snap-Cap Vials! Introduced just one year ago, already they're a staple among prescription containers, with demands way ahead of expectations—and still skyrocketing!

There's good reason for this success. For here is a prescription container that gives the ultimate in clarity and style with the maximum in convenience.

Snap-cap is on or off with the flip of a thumb . . . no matter how often it's used. The vial's specially tooled neck and lip assure a secure fit . . . unusually high moisture-vapor resistance.

And to these advantages add economy! For Snap-cap vials hold up to *30 to 40% more capsules and tablets* than other *vials, plastic or glass, of same designated size.*

The complete range of Kimble Vials lets you give your customers all these advantages for packaging any dry Rx:

1. Polyethylene Snap-Cap—Easily opened and closed with flick of thumb.

2. Crystal-Clear Glass—Contents can be quickly identified by color and shape.

3. Light Weight—Easy to carry in pocket or purse.

4. Tooled Finish—Tight seal assures positive protection of contents.

Order Kimble Opticlear Snap-Cap Vials from your O-I wholesaler today. They're a product of the Kimble Glass Company, subsidiary of Owens-Illinois.

KIMBLE OPTICLEAR SNAP-CAP VIALS
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GENERAL OFFICES • TOLEDO 1, OHIO

the Board of Directors, he takes the place made vacant by the recent death of *Ralph R. Patch.* (*See obituary, page 651.*)

New York Quinine—Sales Manager *William A. Thawley* recently filled two speaking engagements with the Pharmaceutical Research Discussion Group of East Orange, N.J., and with the Philadelphia College of Pharmacy and Science where he spoke on "Sales Opportunities for the Pharmacist in the Chemical Process Industries."

Schering Corporation paid tribute to the nation's pharmacists during National Pharmacy Week in a program that utilized radio, television and newspapers. Popular TV shows such as the Monday night *Lawrence Welk* program and *Dave Garroway's* "Today" were employed; *Dr. John McDonnell,* Vice President, spoke to the New York Advertising Club on Oct. 11 about the pharmaceutical industry and how it works as a partner with physicians and pharmacists; and *Vice President Herman W. Leitzow,* a featured speaker at the NARD convention in Minneapolis, applauded the pharmacist in radio and television interviews. According to *Paul Wickman,* Director of Public Relations, plans for the 1958 tribute to pharmacy will be "even more ambitious." . . . Winners of the 12th Annual Schering Award Competition for medical students were recently announced by *Dr. Richard McCormick,* Committee Chairman. Two of the 3 first place winners sharing the $4,500 prize money in the 1957 contest won similar awards of $1,000 each in 1956. They are *Nathaniel Silon* of Albany Medical College and *Marvin Gottlieb* of the University of Tennessee College of Medicine.

Wyeth, Inc.—*Stuart V. Smith,* Vice President and Director of Sales for Wyeth Laboratories has announced the appointment of *A. W. Blendow, Jr.,* as Manager of the newly created Sales Training Section. According to Mr. Smith, "The rapid growth and progress of Wyeth Laboratories has made it advisable to establish a separate training unit of the sales department." . . . *Frederick J. Cavanaugh* has been made assistant to *R. C. Hodgman,* President of Wyeth International Ltd., the company's overseas affiliate. Mr. Cavanaugh, a graduate of Massachusetts Institute of Technology and Harvard University, was formerly General Manager of the Colombian office of E. R. Squibb and Sons.

GENOVESE DRUG CHAIN President, Joseph Genovese (r) receives a decorated prescription bottle from Robert C. Donovan, Owens-Illinois representative, on the opening of the company's 2nd self-service drug store on Long Island, N. Y. The new store features a larger prescription department which is the focal point of the store. The occasion also marked the filling of the Chain's two millionth prescription.

RETAILING

Consolidated Brooklyn Retail Pharmacists, Inc.—In a special ceremony held in the office of Brooklyn Borough President *Hon. John Cashmore* on October 1, the Borough President made an official proclamation for National Pharmacy Week. In his tribute to the pharmacists, Mr. Cashmore stated that the outstanding services of the pharmacist in promoting the health standards of the people . . . cannot be evaluated in any monetary manner. In conjunction with National Pharmacy Week, the Brooklyn group announced the start of a program of institutional bus advertising, urging people to buy all drug and drug products from licensed pharmacists in a pharmacy as a further protection to public health. Participating in the ceremony at the Borough President's office were *Max Grossman,* President, *Moe Weiss,* Executive Secretary, *Raymond A. Rifkin,* 2nd Vice President, and *S. Charles Savio,* Secretary, representing the 1,500 pharmacy owners in Brooklyn.

Federated Pharmaceutical Service Guild of Australia—*Eric Scott,* President, and *Robert Ross,* Merchandising Manager, (*see picture, page 644*) recently spent 2 months touring the U.S. to observe merchandising, marketing and advertising techniques, particularly those employed by drug stores. Their visit to this country, that included a visit to APhA headquarters in Washington, D.C., was sponsored by Parke Davis & Co., Warner-Lambert Pharmaceutical Company, Inc., and Bristol-Myers Co.

The Australians said American drug stores, with their soda fountains and wide assortment of nonmedical merchandise, flabbergasted them during the first several weeks of their visit. The most impressive and most stimulating trend they have detected, President Scott said, is a movement to convert American drug stores into more ethical pharmacies, along the lines of the Australian chemist. "The future success of a pharmacist or chemist is dependent upon how well he develops his ethical status—he is not just a storekeeper," Scott declared.

Read's Drug Stores' Foundation of Baltimore, Md., recently made available more than $3,000 to the University of Maryland School of Pharmacy to support 6 pharmacy freshman scholarships. The scholarships have been formally presented at a joint meeting of the University of Maryland Pharmacy Alumni, the Baltimore Retail Druggists Association, and the Maryland Pharmaceutical Association. The Foundation also sponsors 5 other pharmacy scholarships that have been available to upperclassmen since 1944.

Southeastern Drug Journal has announced the establishment of a continuing series of "Distinguished Service" awards to pharmacists in the 7 state area served by the Journal. The awards, to be given each year to one or more pharmacists, are provided in an effort to encourage more pharmacists to devote themselves selflessly to the betterment of the profession of pharmacy and to participate more fully in their civic and community life. In order to qualify, an award candidate must be a registered pharmacist and currently engaged in retail pharmacy or hospital pharmacy; must have distinguished himself in his profession or in service to his fellow man; and, this service must have represented some personal sacrifice on his part. According to *James H. Bishop, Jr.,* Editor of the Journal, a nominating committee, composed of pharmacy school deans and pharmaceutical association officials, has been selected. Nominations for the 1957 award will be made no later than December 1.

Standard Drug Company of Cleveland, Ohio, was the recent recipient of a special plaque from E. R. Squibb & Sons signifying the filling of 10,000,000 prescriptions. *George S. Squibb,* Director of Distribution, presented the plaque to *Robert W. Campbell,* President of Standard Drug, in a special dinner ceremony held in Cleveland and attended by executives from both firms and the managers of Standard's 46 drug stores.

S. S. Weiss Drugs of Philadelphia, Pa., recently filled its one millionth prescription. To commemorate the occasion, *W. L. Garrity,* Regional Sales Manager of E. R. Squibb & Sons, presented a plaque to *Mr. S. S. Weiss* who has been a pharmacist for 50 years.

The REAL Wonder Drug!

AND REASONS WHY YOU SHOULD GIVE
BAYER ASPIRIN MAXIMUM DISPLAY

1. BAYER ASPIRIN is the fastest-turnover drug item in America . . . and right today it continues to set new sales records.
2. As a traffic builder Bayer Aspirin has never had an equal . . . it has no equal today among packaged medicines.
3. Put it in the hottest spot . . . the most valuable space in your store . . . *and Bayer will pay its way* . . . and then some! Bayer Sells on Sight.
4. Saturation Advertising that reaches *every one* of your customers through Television, Radio, Magazines, Sunday Supplements and Daily Newspapers is pushing Bayer sales up to new all-time highs. Tieing your store to successful advertising like this always pays off *big!*

BRANCHES

LOCAL BRANCHES

Charleston (S.C.) **Local Branch**—On October 9 this group formally began functioning as a local branch of the APhA. *Dr. Robert P. Fischelis,* Secretary and General Manager, presented the Charleston group its Charter at a dinner ceremony held in the Fort Sumter Hotel. Dr. Fischelis also addressed the new Charleston Branch on the subject "Pharmacy in the Nation's Service"; earlier in the day he gave a talk to the student body of the Medical College School of Pharmacy and spoke over Station WCSC on "Many Facets of Pharmacy."

Already functioning as old hands at the business, the Charleston Branch lined up radio and television time all through National Pharmacy Week, even had a proclamation issued by Mayor Morrison.

Branch officers include: *J. Hampton Hoch,* President; *John F. Baker,* Vice-President; *Betty C. Stamatiades,* Secretary; *Elliott P. Botzis,* Treasurer; and *Donald James,* Delegate.

Fresno-Madero County Branch—*President Howard O'Brien* conducted the last general membership meeting at this branch held at the Californian Hotel. Guest speaker for the evening was *Arthur Selland,* Manager of the E. F. Hutton Company. Topic for the evening: "Now is the Time to Invest." On September 25, the Board of Directors met at the Blackstone Hut. Plans were drawn up for the annual dinner-dance sponsored by the Women's Auxiliary to be held March 1. Other items discussed were the new state medical care program for the needy and a proposed letter to wholesalers regarding sales to non-drug outlets.

Indianapolis Branch—At the last regular business meeting reported, *Dr. Anton Schwarz,* virologist of the Pitman-Moore Research Division spoke on the timely subject: "The Problem of Influenza With Special Reference to Asian Influenza." Augmenting the talk, several slides were shown on the manufacturing of the flu vaccine. Before Dr. Schwarz was introduced for the evening, 10 committees were organized ranging from executive committees to telephone committees. Altogether, some 34 people were assigned tasks of committee-members.

Northern California Branch—*Bob Birkbeck* is the new Vice President, filling the term of Kenneth Ballard, now with the U.S. Public Health Service. Birkbeck is a medical representative with Parke-Davis. Board appointments include *Calvin Chow* and *Eddie Frieze.* In attendance at the dinner meeting at Oakland were *APhA President-Elect and Mrs. Louis Fischl.*

Northern New Jersey Branch—Re-elected for another term are the following officers: *Sidney Schneider,* President; *Emil Martini, Jr.,* Vice-President; *Goodsell F. Waters,* 2nd VicePesident; *Michael Iannarone,* Secretary-Treasurer; *John Voigt,* Publicity Director; and *Walter Uhlman,* Chairman of the Executive Committee.

STUDENT BRANCHES

Butler University—*Herbert Brandt* serves as branch president for this school year. Other officers of the Butler group are *Joe Fedor,* Vice-President; *Frank Huff,* Secretary; and *Richard Jackson,* Treasurer.

Creighton University—Officers for the current school year are *Richard Laska,* President; *John Heffron,* Vice-President; *Diane DuPuis,* Secretary; and *Richard Coe,* Treasurer. An interesting phase developed in the last regular meeting of the Creighton branch—at every meeting, one speaker will present a discussion on all late developments in the drug field.

Duquesne University—This branch held its September business meeting (attendance, 250) in the Campus Theater, with the following reports presented: *Samuel Talarico* reported on the annual Pennsylvania Pharmaceutical Association convention in Atlantic City; *Thomas Galuska* and *Louis Linarelli* reviewed the APhA convention held in New York; and *Michael Newman,* President of Rho Chi, explained the purposes of that organization.

Ferris Institute—At the September 25 meeting, a special conference committee was selected from the honorary sorority, Lambda Kappa Sigma; the honorary fraternities, Phi Delta Chi and Kappa Psi; the honor society, Rho Chi; and from the student branch itself. Committee members are *Don Anderson, Jacquey Vanden Heuvel, Bill Ouweleen, Don Morgandale,* and *Odel Ellis.* The committee was set up to work on a Student Pharmacy Conference coinciding with National Pharmacy Week.

George Washingon University—*Charles J. Kokoski* is the new faculty adviser here, replacing *Robert Leonard.*

Howard University—New officers of Howard's Student Branch include *Sylvester Flowers,* President; *Fannie Jones,* Vice-President; and *Lydia Cooper,* Secretary-Treasurer. Representatives for the branch are *James Snowden, Larry Wilson,* and *Francis Henderson.*

Medical College of Virginia—*President Frank Robertson* called the first meeting of the school year to order on Sept. 27. Programs arranged for the future include a trip to Washington, D.C. and a visit to APhA Headquarters in December. *Dr. J. Krezenoski* was faculty representative at the meeting, along with the faculty adviser, *Dr. M. L. Neuroth.*

Montana State—The football season unfolds and goes into the stretch drive. Montana State students of pharmacy took part in the football festivities by building a float representing the Pharmacy College, for the Homecoming Game. Future plans include attendance at the Regional meeting of the APhA held in Oregon.

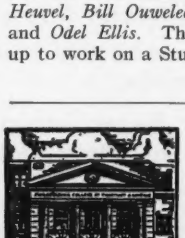
New England College of Pharmacy—*Fred G. Slaney* will be President of this Branch for the school year. Other officers include *Joseph Caturano,* Vice-President; *Paul Davignon,* Secretary; and *Arthur Trinque,* Treasurer. *Earl Batson* and *Robert D. Kelly* are 2nd and 3rd Vice-Presidents.

Ohio State University—At a special election, *Nancy Ellen Scott* has been elected Secretary of the O.S.U. Branch.

St. Louis College of Pharmacy—The former assistant to the Secretary of APhA, *Charles Rabe,* was guest speaker at the last general membership meeting held in October. Rabe spoke on various phases of pharmacy in the community. College representatives went into the high schools during National Pharmacy Week, in an effort to better acquaint the students with the pharmaceutical profession. One member, *Joanne O'Brien,* talked with pharmacists in her home town, (Belleville, Ill), and succeeded in having a full page advertisement on National Pharmacy Week placed in the local paper. Winners of the Window Display contest were *Sisters Francis Marie Patterman* and *Mary Matthew Dagenhart,* and *Fred Rosenthal.*

Southern College of Pharmacy—*Dr. Douglas Johnson* has been appointed faculty adviser for the student branch here. Dr. Johnson succeeds *Dr. S. M. Wang.*

Southwestern State College—*Dr. Walter Dickson,* new instructor of Pharmacognosy, spoke at the last meeting on the various



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Philadelphia College OF PHARMACY AND SCIENCE

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problems encountered in research during his graduate study. Discussion centered around antibiotics and their use in preserving food. *Mr. George Bachloff* has also joined the staff at Southwestern.

State University of Iowa—The Rose Bowl Game was all but replayed on Oct. 2 as the Iowa student branch watched movies of the mid-winter trip of last January. (Iowa's Hawkeyes won the Bowl game). Rounding out the tight-scheduled evening, *Dean Louis C. Zopf* awarded scholarships, fellowships and other honors to students for the previous year's work.

Temple University—New officers for the school year include *Martin Jiunta*, President; *Lawrence DiBello*, Vice President; *Barbara Ricca*, Corresponding Secretary; *Nancy Hinman*, Recording Secretary; and *Jon May*, Treasurer.

Xavier University—Elected for the year at Xavier are *Robert L. Williams*, President; *Clifford T. Green*, Vice President; *Eva E. Celestaine*, Secretary; *Anne Y. Luster*, Treasurer; and *Jacqueline D. Evans*, Reporter.

University of Illinois—Officers for the school year are *Olfeo Lorenzetti*, President; *Arthur Karwacki*, Vice-President; *Elizabeth Wassmer*, Secretary; and *Marshall Olsen*, Treasurer.

University of Kansas City—President of the student branch at the University of Kansas City is *Jay B. Peckham*. Other officers for the year are *Lawrence Helmstatter*, Vice President; *Carolyn Dickson*, Secretary; and *Merlin G. Bruner*, Treasurer.

University of North Carolina—*Dr. Earl T. Brown* has been announced as the new faculty adviser at the University of North Carolina. Officers for the student branch include *James Inabinet*, President; *Donald K. Carter*, Vice President; *Dorothy Johnson*, Secretary; *Ray Hagwood*, Assistant to the President; and *Billy Allen*, Executive Committee Member.

University of Puerto Rico—The first meeting of the student branch here at the University of Puerto Rico got the students off at a swift pace. Besides three guest speakers (*Dean Luis Torres Diaz, Dr. Esteban Nuñez*, and faculty adviser, *Dr. Leo Lathroum*), some 12 students were assigned to committees. *President Daniel Mahiques* conducted the meeting.

University of Southern California—The following officers have been announced for the school year here at Southern California: *Ignacio Coronado*, President; *Perry Meece*, Vice President; *Margaret Harrison*, Secretary; and *Roy Smith*, Treasurer.

University of Texas—Officers for the school year are *Paul Trantham*, President; *Bill Riddick*, Vice President; *Peggy Lipscomb*, Corresponding Secretary; *Peggy Keer*, Recording Secretary; and *Carolyn Craig*, Treasurer. Other officers include *Margie Jordan*, Editor; *Don Bruce*, Parliamentarian; and *Bill Ed Foster*, Orientation Chairman.

University of Wyoming—Like Montana State, the students here are football conscious, built a float for Homecoming. The Wyoming Cowboys had a cowboy on the float, holding a mortar and pestle, and the words, "Crush the Cougars" (Brigham Young Univ.).

DR. DUNNING HONORED

Dr. Henry Armitt Brown Dunning, philanthropic co-founder of THIS JOURNAL, who has made substantial contributions as educator, scientist, and as retail pharmacist, and pharmaceutical manufacturer, was honored by means of a testimonial dinner at the Sheraton-Belvedere Hotel, Baltimore, Md., on Oct. 24, his 80th birthday.

Honorary Chairman of the program committee for the Maryland Pharmaceutical Association, which tendered the dinner, was Dr. Robert L. Swain, Editor of *Drug Topics*. Joseph Cohen, Secretary of the Association, served as Chairman of the Committee and toastmaster for the occasion. Dr. Swain, one of Professor Dunning's students in 1906, praised Dunning, with evident affection, for the excellent advice and guidance he had received from the elder statesman of Pharmacy.

Dr. W. Paul Briggs, Executive Director of the American Foundation for Pharmaceutical Education, stressed Dr. Dunning's astute grasp of detail, his great capacity for leadership, and his breadth of vision.

Finally, Dr. Robert P. Fischelis, APhA Secretary and General Manager, reviewed Dr. Dunning's outstanding record of service to American pharmacy and presented a long list of contributions to his chosen calling.

MORPHINE AND ALLIED DRUGS

A. K. Reynolds and Lowell O. Randall

"This monograph presents a wealth of information on the potent analgesic drugs in a single volume . . . . the task of preparing a comprehensive treatise on this subject was formidable. The authors have accomplished this objective in a capable manner."—*Journal of the American Medical Association.*

A. K. Reynolds is Assistant Professor in the Department of Pharmacology, Dalhousie University, Halifax, Canada. Lowell O. Randall, senior pharmacologist with Hoffmann-La-Roche Inc., has published widely in the fields of pharmacology and biochemistry.

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Obituaries

Ralph R. Patch, 75, manufacturer and Army medical officer, passed away in Stoneham, Massachusetts on September 18, after a long illness. A native of Stoneham and a 1906 graduate of M.I.T., he served as Vice President, General Manager, President and Treasurer of the E. L. Patch Company which his father had founded in 1906. From 1951 until his death he was Chairman of the Board of E. L. Patch. A reserve Army officer since 1923, Mr. Patch retired from business in 1942 to enter active military service as a Lieutenant Colonel, detailed to the Office of the Surgeon General until 1945.

Mr. Patch held offices in the American Pharmaceutical Manufacturers' Association, American Drug Manufacturers' Association, Boston Druggists' Association and the Massachusetts State Pharmaceutical Association. He was a trustee of the Massachusetts College of Pharmacy.

Edward Spease, 74, for 24 years Dean of the Western Reserve University School of Pharmacy, died on October 12 in Akron, Ohio. His distinguished contributions to hospital pharmacy included establishment of the first graduate program of hospital pharmacy and development of the first set of Minimum Standards for pharmacy practice in hospitals. He vindicated the use of a formulary in hospitals, the institution of hospital pharmacy internships and the formation of a Pharmacy and Therapeutics Committee.

A 1905 graduate of Ohio State University, he held an honorary M.S. from Philadelphia College of Pharmacy and Science. He became Dean of Western Reserve in 1916. An honorary member of the American Society of Hospital Pharmacists, he received the Whitney Award in 1952. He was a former president of the American Association of Colleges of Pharmacy.

William F. Sudro, 72, retired Dean of the School of Pharmacy of North Dakota Agricultural College, passed away on September 30, in Neenah, Wisconsin. Born in Elyria, Ohio, Mr. Sudro received his B.S. from the University of Michigan in 1906 and his M.S. from the University of Wisconsin in 1919. Having been both practicing chemist and teacher of Pharmacy and Pharmacology, he became Dean of the North Dakota School of Pharmacy in 1926. On his retirement in 1955, Mr. Sudro had been a member of the faculty for 48 years. He served as Chemist in the North Dakota Regulatory Department and as President of the Northwest Pharmaceutical Bureau in 1926.

CURRENT COMMENT

Self-Medication Dangerous

Two recent cases in New York City illustrate the danger of self-medication. One 15-year-old girl, with an unbearable headache, took two Anacin tablets, and when she got no relief kept taking more until she had taken some 40 tablets.

Another 17-year-old girl with severe headache and abdominal cramps repeatedly took aspirin until she had ingested 60 grains. When the pain persisted, she went to the medicine cabinet, took a bottle of yellow pills which were prescribed for her mother by her family physician and ingested an unknown quantity. These were pentobarbital.

Both patients required medical treatment. The latter was in a coma for two days.

The chief offenders in such poisoning accidents due to self-medication are adolescents, and the most frequent cause is "headache" of undetermined origin.

Infection from Thermometers

The clinical thermometer should not be overlooked as a source of cross-infection during epidemics, according to recent articles in *Lancet*, *Journal of the American Medical Association*, and *South African Medical Journal*. It is not always practical to have a separate thermometer for every person stricken with disease, particularly during an epidemic such as that we are now facing.

However, proper sterilization techniques should be employed. According to the AMA a 1:10,000 solution of bichloride of mercury used to sterilize thermometers was found to contain 7,000,000 organisms per cc. Also, 63 out of 109 thermometers that had been immersed in a 1:1,000 solution of biniodide of mercury for about 4 hours were found to be contaminated with *Micrococcus pyogenes* var. *aureus*, hemolytic streptococci, and *Escherichia coli*.

A 1:1,000 solution of benzalkonium chloride in 70% isopropyl or ethyl alcohol sterilizes thermometers completely in 10 minutes. It is also desirable to wipe thermometers with a soapy pledget of cotton before immersion and to change the solution frequently.

Ingestion of Mercury

Eighteen incidents involving metallic mercury ingestion were reported by the Poison Control Center of New York City Department of Health during its first two years of operation (since March 1955). Of these, 12 were associated with the ingestion of mercury from broken thermometers. Physicians were requested to note the following:

1. If the thermometer fluid is colored, usually blue or red, the presence of a minute volume of alcohol is indicated. Sometimes a slight amount of odorant such as an essential oil is added to the alcohol. The incidents can be dismissed as inconsequential and only the hazard which may result from the glass should be considered.

2. If the liquid is silvery, mercury is involved. In these cases, a saline cathartic is indicated and is probably the only measure needed. Again, the real hazard may be the one resulting from the glass.

In the April 6, 1957 issue of the *Journal of the American Medical Association* (pages 1309–1310), it was pointed out that up to a pound of mercury was at one time administered for intractable constipation and that no mercury poisoning followed this practice although occasionally stomatitis, tremors, and other reactions did arise. Such therapy is no longer recommended.

The hazards of mercury vapor and the exposure to small amounts of mercury over extended periods of time result in chronic mercury poisoning. According to the *Pharmacological Basis of Therapeutics* by Goodman and Gilman:

"Chronic mercury poisoning. . .is encountered in industries which utilize mercury for its salts, and also may result from mercury medication. The signs and symptoms characterizing this condition are stomatitis, colitis, progressive renal damage, loss of appetite, nutritional disturbances, anemia, and peripheral neuritis. The central nervous system is also involved. . . .The treatment of chronic poisoning is purely symptomatic. . .chronic mercury poisoning responds slowly to therapy, and the patient may remain in ill health for years."

Faculty Salaries

The outlook appears to be brightening for college faculties as far as salaries are concerned. Higher minimum levels are being established in many universities.

For example, the University of Texas has established the following minimum salary levels: $4,000 for instructors, $5,000 for assistant professors, $6,000 for associate professors, and $7,500 for professors. The respective average salaries for these categories will be $4,638, $5,651, $6,842, and $9,763.

Salaries of internationally-distinguished teachers range from $13,500 to $15,000.

U.S. Census of Pharmacy

During the year 1956, according to the latest census of the National Association of the Boards of Pharmacy, 5,078 pharmacists were added to professional practice, but 341 of these were added by reinstatements. Therefore the number of persons licensed for the first time was 4,737.

Statistics indicate that of the 110,688 licensed pharmacists in the 48 States and the District of Columbia, 90.5% or 100,195 pharmacists were engaged in retail practice in 52,351 retail pharmacies on January 1, 1957. Nearly 66% of these have completed the 4-year curriculum.

On the basis of large samples it is estimated that about 3.6% of the pharmacists engaged in professional practice are employed in hospital pharmacies; 2.3%

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are engaged in manufacturing and wholesale plants; 2.8% are representatives of producers and distributors; 1.0% are in teaching and Government positions; and 0.7% are engaged as pharmacists in other capacities. Employee pharmacists who do not have a financial interest in the pharmacies in which they are engaged represent 49.8% of those in practice. It is interesting to note that 3.8% of all pharmacists in retail practice are 70 years or more of age.

The above statistics are based on the best available information. Only a few states did not report to the NABP.

The Professional Degree

It has been pointed out by the Health News Institute that pharmacists are proud of their broad education, as well as their technical skills, and that frequently they are the only men in many city blocks of retail establishments who possess college degrees.

"Why should not the pharmacists take a leaf from the book of other professions?" asks HNI. The door of a physician is inscribed with the initials M.D., that of a dentist, with D.D.S., and that of a veterinarian, with V.M.D. Very properly, therefore, a pharmacy could feature the name of the proprietor and his associates inscribed on a suitable sign followed by Ph.C., Ph.G., D.Sc., M.S., or Phar. D. It is, of course, preferable to use the initials denoting a college degree rather than the initials R.P. which are used in some instances to denote that the practitioner is a registered pharmacist.

Air Pollution

Human beings have a right to air that is safe for breathing at all times. States and large industrialized cities are recognizing the need for more efficient control of air pollutants. A recent study entitled *A Report on Air Pollution in Illinois* issued by Governor William G. Stratton of Illinois through the State Department of Public Health presents a typical review of present day air pollution problems. This report mentions several disasters in various parts of the world that prove air can be polluted to a dangerous extent. These major disasters are as follows:

Donora, Pennsylvania—In October, 1948, Donora, Pennsylvania, a town of about 13,000 population containing a zinc plant and a steel and wire plant experienced a large number of acute illnesses and 20 deaths during a heavy smog.[1]

Meuse Valley, Belgium—Between December 1 and 5 of 1930, a heavy fog covered a large part of Belgium. A number of people were made ill, several hundred were severely attacked with respiratory symptoms, and 63 died on December 4 and 5, after only a few hours of illness. Many cattle had to be slaughtered... Chemists found 30 substances polluting the atmosphere...including carbon monoxide, carbon dioxide, nitreous gases, sulfur dioxide, and hydrogen fluoride.[2]

London—The dense fog that occurred at the end of November, 1948 was unusual both for its duration and its intensity. It... caused a considerable increase in mortality...The cause of (the) deaths was...pneumonia and respiratory diseases. On December 5, 6, 7, and 8, 1952, a heavy fog occurred. Estimates of the number of deaths caused by the fog range from 2,000 to 4,000. In January, 1956, another severe fog increased the mortality rate in the London area. An estimated 1,000 deaths were due to this fog.

Previous serious incidents occurred in London during December, 1873; January, 1880; February, 1882; December, 1891; and December, 1892.

Mexico—In 1949, 22 deaths and over 250 illnesses were caused by the escape of hydrogen sulfide from an oil refinery at Poza Rica, Mexico. The hydrogen sulfide burning flare was extinguished during weather conditions suitable for holding air pollution near the ground.

Los Angeles—Physicians in this city report irritation to mucous membranes of the eyes and respiratory tract. During smog periods, patients with asthma, hay fever, and chronic respiratory diseases suffer intensely. School children report eye irritation, and teachers notice decreased attentiveness and efficiency, and increased disciplinary problems during smog periods.

The American Cancer Society reports that "We are creating a marked cancer hazard in the air over our big cities by dumping all manner of fumes and gases into the atmosphere. The increasing frequency of lung cancer in the cities as compared with rural areas all over the world indicates that the atmosphere may be the principal cause of this disease.

[1] Public Health Bulletin 306(1949). Schrenk, H. H., and others.
[2] Fog Along the Meuse Valley," Firket, J., *J. Trans. Farraday Society* (1936)

New Insurance Plan

The first program of prepaid drug prescription insurance offered on the North American continent will go into effect January 1, 1958 for a 3-month trial period to test out rates, in Windsor, Ontario, Canada. All prescriptions for subscribers in Windsor and Essex County will be filled at an expected average annual cost of $10 per person. The new service will be patterned after successful hospital and medical insurance plans.

Physicians-Pharmacists Cooperate

In Spokane (Wash.), four professional pharmacies and the local medical society have found a tangible way to demonstrate their close working relationship. For the third year they have donated the funds for two medical students to continue their education at the University of Washington. In accepting the gift, the President of the University pointed out that the scholarships "have helped some very deserving young men along the road to medical education. We greatly appreciate the interest of the pharmacists and physicians of Spokane in helping these promising future doctors."

Whiskey Lethal

A mother awoke about 10:00 AM and found an empty pint bottle of a popular blend of whiskey on the kitchen floor. She detected a whiskey odor on her 3-year-old child, who was sound asleep. A physician was called and advised hospitalization when the child could not be aroused. In spite of stomach lavage and intravenous administration of supportive therapeutic agents, the child died within 24 hours after it was found asleep.

Another case in which whiskey and orange juice were given to a 3-year-old child produced intoxication and the child was admitted in coma to a hospital. Fortunately, the child responded to therapy and was discharged 3 days after admission.

Another 3-year-old child drank an unknown quantity of wine which had been placed on the kitchen shelf. The child was taken to the hospital with symptoms of dyspnea, cyanosis, and stupor. The patient was placed in an oxygen tent, and supportive therapy was also administered. After 7 days of hospitalization, the child was discharged as recovered.

What To Do After Extraction of a Tooth*

Extraction wounds usually heal quickly and without complications if simple precautions are taken. However, these wounds should not be neglected and they should be given certain attention. Cooperation with the dentist is important.

You should reduce your activity as much as possible for several hours after an extraction. This helps reduce bleeding and permits the formation of a clot in the tooth socket, which is necessary for healing.

What to Eat

To help the healing process, you should try not to miss a meal after a tooth extraction. Soft, nutritious foods such as soft-boiled eggs, chopped meat, custards, milk and soup may be eaten without disturbing the blood clot. Eat these as often as you can for the first few days. Then solid foods should be added as soon as they can be chewed comfortably.

If there is prolonged or severe pain, swelling or bleeding, or if fever is present, you should get in touch with the dentist so that exact instructions for care may be given.

In most cases, if the simple instructions in this article are followed, healing will be prompt and complications will be avoided.

For Relief of Pain

Drugs may be taken for the relief of pain on the advice of your dentist.

Cold Applications

Some swelling is a frequent reaction to the extraction of a tooth and is not cause for concern. There may also be some pain or discomfort for a while after the effects of the anesthetic have worn off. Much discomfort and swelling can be prevented by immediate application of cold to the outside of the face after an extraction. Application of an ice bag or a cold moist cloth to the affected side of the face for about 15 minutes of every hour may be helpful if *it is begun soon after the extraction.*

Rinsing the Mouth

The blood clot should be given time to form and should not be disturbed. Therefore, the mouth should not be rinsed during the day of the extraction. After the first day, warm salt water ($\frac{1}{2}$ teaspoonful salt in a glass of warm water) may be used to rinse the mouth gently.

The mouth should be cleaned and the teeth brushed as usual. It is important to maintain these habits of oral hygiene so that the extraction wound may heal well and not become infected.

Bleeding

Some oozing of blood may continue for a short time after the extraction and may even persist until the next day. However, if there is more than just oozing, the following procedure will help control it:

1. Take a clean gauze pad and gently wipe the blood from the mouth and from over the extraction wound.
2. Place another clean, folded gauze pad directly on the bleeding spot.
3. Close the teeth tightly over this pad so that there is pressure against the bleeding spot.
4. Maintain this pressure for about 30 minutes. Repeat if necessary.
5. If bleeding persists, your dentist should be notified.

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LETTERS

More about Restrictive Sales

Editor's Note—In accordance with our policy of being absolutely impartial in controversial matters, space has been allotted to both Dr. Morton J. Rodman, author of "Restrictive Sales" (see page 540, Sept. issue, THIS JOURNAL), and Dr. Howard Prentice so that both sides of the argument can be fairly presented. The paper in question, read to the Section on Education and Legislation at the APhA New York Convention, has created considerable comment. Many readers believe that unless all distribution of drugs is restricted to those who have devoted 4 to 6 years of their lives in learning how to handle them in the best interests of the public, Pharmacy will soon become professionally and economically bankrupt. Whether this is true or not, we all realize this crucial issue affects the harmony of the total profession.

Sir:

On Page 540, of the September 1957 issue of the Practical Pharmacy Edition of the Journal of the American Pharmaceutical Association, is an article by Morton J. Rodman entitled "Fallacies in Courtroom Battle over Restrictive Sales." A footnote on that page states that the article was presented on May 3, 1957 to the Section on Education and Legislation at the APhA New York Convention.

The article rests on a basic fallacy. Professor Rodman's basic premise is is his assertion that The Proprietary Association was a party to a court trial in Hackensack, New Jersey last autumn. His whole article is based upon that premise.

The truth is that The Proprietary Association was not a party to that action either in name or in fact. The entitlement of the case was "Board of Pharmacy of the State of New Jersey, plaintiff, v. Abraham Adelman, t/a Honey Dew Food Store, defendant." The defendant was supported by the manufacturers of the fourteen products in suit. Not all of those manufacturers are members of The Proprietary Association. There was no participation whatever, financially, legally or otherwise by The Proprietary Association. That fact was clearly stated in the official record of the Court on the second day of the trial. The following are excerpts from the official court record for November 19, 1956, pages 96 to 98:

"MR. BROGAN: (Counsel for the Defendent) If your Honor please, might I address the Court for a brief moment?

"Mr. Salvest (Counsel for Board of Pharmacy) said this morning he wanted to know who was behind this case, and if your Honor deem it relevant and material, I will make a statement as to who is behind the case."

"MR. BROGAN: All I am saying is this: I thought Mr. Salvest made the statement that The Proprietary Association was behind this case, and I make the representation to your Honor that that is not the fact."

"MR. BROGAN: Well, I wish to say then that each of them, the manufacturers of each of these products are here to vindicate their products. Serious charges have been made and they, of course, are very anxious to dissipate those charges and show them to be of no validity whatever."

The court record shows that Professor Rodman was present in the courtroom when those statements were made. Not only was he present but he was at that very time on the witness stand—a witness for the Board of Pharmacy.

The manufacturers—whether members of The Proprietary Association or not—acted as Judge Brogan said "to vindicate their products" and to defend their dealers in the lawful sale of their products. They contended for what they believed to be the law pertaining to the issues of the case, and the Court's decision upheld their position.

The Proprietary Association believes that the manufacturers were right in their position. My only purpose in writing this letter is to have the facts correctly reported. Inaccurate reporting inevitably leads to distortion of the truth. Accuracy is all the more important when an article is written as Professor Rodman's was without—as he himself says—"any attempt" being "made to preserve an air of judicial calm." He says his "views are highly partisan" and that in writing his article "no effort has been made to hide contempt" for The Proprietary Association.

In such circumstances, I need not comment on Professor Rodman's views. I need only say that the article—so partisanly written and with a fallacy as its major premise—is replete with fallacies of fact and law. I ask for published correction only of the primary fallacy.

Howard A. Prentice
The Proprietary Association

Sir:

I appreciate your offering me the opportunity to reply to Dr. Prentice's letter. I do not, however, feel that his defense of the Proprietary Association's position deserves to be dignified by a detailed rebuttal.

I had assumed that the Proprietary Association would prepare a vigorous counterattack against my charges and demand space for it in the pages of THE JOURNAL. I would have welcomed the opportunity to join issue with Dr. Prentice on the question of whether his organization was working for the welfare of the profession and the public.

I did not, however, expect the Proprietary Association to assume an air of injured innocence with those of us who have been following the controversy through courts across the land these many years. The picture of a powerful organization cowering in a corner and crying, "There ain't nobody here but us chickens!" is a ludicrous one, indeed.

It is, of course, a fact that the Proprietary Association was not technically a party to the trial at Hackensack. I had, as Dr. Prentice avers, heard his "Who me?" gambit before in court. But it becomes boring to have him take this tired tack within the Pharmacy family, and try to tell us that his organization was not *in fact* behind this litigation.

The Proprietary Association may have felt compelled to follow this legal fiction in a court of law. But by attempting to take refuge in such a legalism in a letter to the Editor of THE JOURNAL, this organization succeeds only in once again affirming its contempt for the court of Pharmacy opinion.

Dr. Prentice cries his concern for accuracy and truth. Truth, I think, would best be fostered by full debate of the really pertinent points of this controversy in all the forums of Pharmacy. I stand ready to argue these issues with Mr. Prentice, whenever he desires to do so. At present, however, he prefers to avoid even establishing the nature of our differences or discussing them openly.

How can we hope to resolve these points of conflict, as long as the Proprietary Association refuses to take responsibility for acts of aggression against the profession, which can only result in an inevitable reduction in health services that pharmacists alone can offer the public?

Morton J. Rodman Ph. D.
Professor of Pharmacology
Rutgers University

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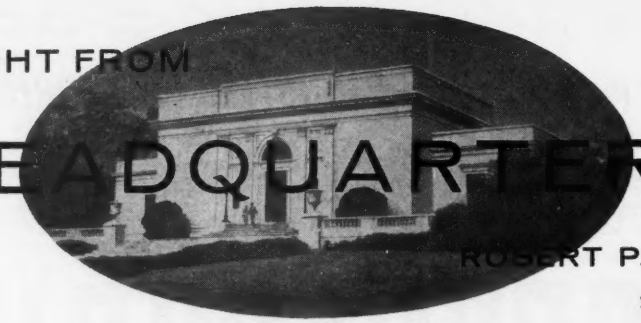

ROBERT P. FISCHELIS, SECRETARY

Three Pressing Problems

At a panel discussion on "Pharmacy of the Future," arranged for the Mid-Year Conference of the American College of Apothecaries at St. Louis, October 21, the panelists, who included representatives of the NARD, AACP, Secretaries' Conference and the APhA, were asked to name the three most pressing problems facing pharmacy today.

This participant, while pointing out that it is obviously difficult for anyone to name *the* three most pressing problems, offered to name three problems which in his judgment required immediate consideration. They are (1) to stop certain pharmacists from misrepresenting pharmacy, (2) to return the emphasis on regulation of the practice of pharmacy to the state level and prevent, as far as possible, enactment of unnecessary federal regulation and (3) to justify and assure the permanence of the physician-pharmacist-patient relationship so as to avoid by-passing the pharmacist in the distribution of drugs and medicines.

In elaborating on these problems, it was stated that pharmacists in active practice, who stoop to unethical and unlawful practices in distributing prohibited drugs without prescriptions, for financial gain, are providing isolated incidents which can be magnified and pointed to with scorn in the public press and elsewhere to the disadvantage of the profession as a whole. Likewise, those engaged in any phase of pharmacy who indulge in rabble rousing tactics and condemn existing organizations for alleged shortcomings without full knowledge of or inquiry into the facts, are misrepresenting the profession to those who are interested in pharmacy as a career, to their contemporaries and to the public—all of which is destructive to morale and to the prestige in which the profession as a whole is held by the public.

It was stated that efforts to acquire more power over regulation of the practice of pharmacy at state and local levels by Federal agencies, such as is manifested in the proposals to tighten regulation of the distribution of barbiturates, through Federal legislation like the Boggs bill, will ultimately result in complete federal dominance over the practice of medicine and pharmacy. This will be distinctly disadvantageous from a regulatory standpoint since there is no better regulation of the health professions than that which has been devised by the development of strong codes of ethics and State regulation with self discipline as the prime enforcement agency.

It was further indicated that the Durham-Humphrey amendment to the Federal Food Drug and Cosmetic Act has unfortunately divided all drugs into two categories, namely, those to be supplied only on prescription (legend drugs) and those which may be supplied to the public without prescriptions. With pharmacy acts as weak as they are in some states, this type of Federal regulation has legalized distribution of drugs through nonprofessional channels and introduced a new middleman in the distribution of potent drugs, in the form of the merchant operating in supermarkets and retail stores of any kind without professional supervision.

Without strong requirements, limiting the sale of dangerous deleterious and potent drugs to those who are professionally qualified to distribute them, there is great danger that the function of the pharmacist may become progressively less important in the physician-pharmacist-patient relationship, to the great detriment of all concerned.

Recruiting for the Profession

On all sides, pharmacists are being exhorted to engage in active recruitment of students of pharmacy so as to assure an adequate supply of desirable practitioners for the future.

Every professional, scientific, and commercial organization is endeavoring to interest high school and college students in its own activities and practically all professional and trade organizations have entered upon campaigns for bringing to the attention of promising students the advantages of making their living in the calling which they represent.

More recently, high pressure public relations efforts have been introduced into these recruiting campaigns to such an extent that even industry as a whole is laying down rules of procedure to curb what are, in essence, considered unfair practices.

The Chamber of Commerce of the United States has recently published broad proposals to protect college students from high pressure job recruiting tactics. A publication entitled "Principles and Practices of College Recruiting" offers a single set of recruiting standards for voluntary acceptance by all colleges and employers including government agencies. The Chamber points out that, in addition to safeguarding students, the proposals would protect the many employers who have refused to high pressure youngsters they seek to hire after graduation.

Among the practices disapproved by the new recruiting guide are the bidding up of salary offers by competing employers, elaborate entertainment of prospective student employees, special payments or other gifts, any undue influence on student job choices by faculty mem-

bers, and expense account padding by students visiting company plants.

As far as we know, recruiting of personnel for the health professions has been free from any such high pressure methods. It is important that the health professions receive their proper quota of desirable young men and women to carry on the services of these professions.

Pharmacy's recruiting program has been conducted on a high plane, and we hope and expect that no one engaged in recruiting pharmacy students will stoop to the practices referred to above. Recent panel discussions at district meetings of boards and colleges of pharmacy, and before other groups, have revealed that apparently there is an increasing lack of interest on the part of high school students in health careers. This must be counteracted.

The National Health Council has recently embarked on a health careers recruiting program and has appointed a commission headed by Dr. Leonard Scheele, former Surgeon General of the U. S. Public Health Service to bring to the attention of vocational counselors and high school students the satisfactions which can be derived from health careers.

In a recent address, Mr. Basil O'Connor, President of the National Health Council, has indicated that, although it is important for health career minded persons to be reminded that work in this field requires an unusual amount of dedicated service, the time has arrived to give consideration to what it takes to provide a standard of living commensurate with the positions occupied by those engaged in health careers.

With the necessities of life becoming more expensive, it is not reasonable to expect that those who must carry on the work of the health professions, and are therefore not subject to a schedule that is run by the clock, should derive their reward so largely from the intangible satisfactions of a dedicated life.

The Los Angeles Convention

It is not too early to give thought to the 105th convention of the AMERICAN PHARMACEUTICAL ASSOCIATION and affiliated and related organizations which will be held at Los Angeles, California the week of April 20, 1958. Full information as to housing facilities and meeting arrangements will appear in an early edition of THIS JOURNAL and will be transmitted by direct mail to all of our members. However, those who expect to attend this West Coast meeting will do well to bear in mind that this convention opens on the second Sunday after Easter and lay their plans accordingly. In 1958, Easter falls on April 6.

Local committees will be appointed in the near future and will represent members of the Greater Los Angeles Branch of the APhA, the Southern California Pharmaceutical Association, the California State Pharmaceutical Association, the American College of Pharmacists, the local Hospital Pharmacists organizations and other groups. The administrative details of the convention will be handled, as usual by the ASSOCIATION's Washington headquarters staff, supplemented by the cooperation and friendly assistantance of local members of the ASSOCIATION.

We look forward to a most successful meeting.

Rufus Ashley Lyman

The demise on October 12 of Dr. Rufus A. Lyman marks the passing from our midst of a most colorful, and inspiring figure in American pharmacy, whose influence on pharmaceutical education, and therefore on the future of pharmacy, will be felt for many years to come.

Few men who have labored in our field have contributed so much and have influenced so many people as this rugged individualist who knew how to work with others to accomplish desirable ends without compromising his own ideals or the principles upon which his conception of pharmacy and pharmaceutical education were based.

Dr. Lyman was not a pharmacist. He was a physician who possessed the essential qualifications required for the broadest interpretation of the healing arts. He was a shining example of the inspirational teacher.

Nothing that has transpired in pharmaceutical education in the past fifty years has been without the influence and sometimes the strong and masterful direction of Dean Lyman. As President and as a member of various committees of the American Association of Colleges of Pharmacy, notably its Executive Committee, of which he was chairman for some time, Dr. Lyman contributed greatly to the progress of the Association and the profession.

Dr. Lyman had the distinction of organizing not only one but two colleges of pharmacy. After he reached the retirement age at the University of Nebraska, he accepted the call to establish the College of Pharmacy at the University of Arizona. He carried this institution through its formative years and assured its permanence before his second retirement as a college dean.

Dr. Lyman was an ardent supporter of the AMERICAN PHARMACEUTICAL ASSOCIATION and in 1952 the Association elected him as its Honorary President in recognition of his many outstanding achievements and contributions to American pharmacy. He also received the Remington Honor Medal.

Perhaps as fine a tribute as could be written to the accomplishments of this man has been penned by one of his sons, Dr. Rufus A. Lyman, Jr., in the following words:

"On October 12, 1957 my father died. Let us not view this event only as our loss, but as a suitable conclusion to a life that had already given to us everything that it could possibly give. His lifetime spanned the period from the disaster of the United States Seventh Cavalry on the Little Bighorn to the occasion of man's first successful effort to penetrate outer space. He lived to see his dreams realized not only in brick and in mortar, but in the integrity of a profession, in the spirit of Universities, in the soul of his church, and in the character of his students, his children, his grandchildren, and his great grandchildren. He lived to see his words acclaimed and his likeness cast in bronze. He saw his work pass into the hands of dedicated men of proven competence. He tasted of poverty, of sorrow, of prosperity, and of triumph. To the very end he was privileged to enjoy the full use of his body and his intellect. All these are not small things.

"Let us not take this occasion for expressions of grief. This is a time to pray that we may be given the opportunity, the vision, and the courage to build as he has built, that we may be rewarded in like measure."

EDITORIALS

Manufacturers of drugs are gradually awakening to the fact that some of their thinking in regard to their promotional efforts has been seriously in error. Both "ethical" drug manufacturers who do not promote their products directly to the ultimate consumer, the patient, and proprietary drug manufacturers who do promote their products directly to the consumer have begun to realize the error of some of their notions and actions.

For example, a few of the "ethical" group have been guided by the philosophy that all that was necessary for optimum promotional effort was to concentrate on the practicing physicians exclusively. The physician writes the prescription, *ergo* he completely controls the flow of "ethical" products. How wrong can clear-headed executives be! What a futile budgetary drain to cast all one's eggs into one basket, especially the "circular file" reserved for direct mail advertising.

We often look back over the years to our own numerous personal contacts with the physicians when we were engaged in professional practice. We recall the thousands of prescriptions we personally wrote for physicians after recommending certain selected products because we knew that Drs. So and So had been highly successful in treating several similarly-afflicted patients with the drugs.

Intimate daily contacts with a large number of physicians gave us unbiased insight into the efficacy of medication which the busy physician was incapable of obtaining. He depended upon us to keep him informed for he knew we viewed all information with the eye of the skeptic, and he knew that when we told him a drug was effective our statement was based on wide professional experience with actual patients. He merely cited to us his diagnosis, and we had at our fingertips data on several modern drugs for any selected route of administration *plus* information on efficacy. As we look back now, the impact on distribution was enormous — much greater, even, than that achieved by the professional representatives, who incidentally soon learned to approach us prior to visiting the physicians who were our clients.

Ethical manufacturers, that is the relatively small percentage who have been misled, are now realizing how they have been only partially effective, and they are now courting the pharmacist, as well as the physician, whenever they promote new prescription products.

The renewed appreciation of the pharmacist as a key personality in the promotional effort was stated very well recently by Editor Louis E. Kazin of *Drug Trade News* when he wrote:

> "anyone familiar with the operation of a prescription department knows how often the average physician visits the pharmacist and discusses up-to-date product data on both new and old prescription specialties. . . .these informal prescription contacts are not prearranged. . . .they don't show up on surveys and depth studies. . . .many prescriptions are written on prescription counters of drug stores during such visits. At such times, the pharmacist is in an obvious position to influence the physician's prescribing habits.

Certain proprietary drug manufacturers continue to promote their products in nonprofessional outlets. In fact we have discovered that a few are completely ignoring the profession of Pharmacy of which they are an integral part, and they are actually catering largely to supermarkets, groceries, and other outlets for the trades. It is unfortunate that such firms go so far in this direction that they even advertise their products in the literature of these trades almost exclusively and largely ignore the publications of their own profession.

There are certain States in which the pharmacy laws prohibit the sale of drugs, medicines and poisons by persons not under the personal supervision of registered pharmacists. Exceptions are made in the case of proprietary preparations and simple household remedies which are not considered poisonous, deleterious or harmful if used without professional advice. There are now pending several cases before Supreme Courts of several States which have a direct bearing on the definition of proprietary preparations and will undoubtedly go far to determine what the future outlets for these products will be.

We submit that under any circumstances it would be to the benefit of producers of these borderline products, and the consumer, to have all such remedies distributed under professional auspices. Just as a retail distributor is free to select the products which he wishes to distribute, so the manufacturer is free to select his distributors, but it is incumbent upon those who deal in products intimately connected with the public health to give consideration to something more than the financial gain that results from the production and distribution of drugs.

Eric W. Martin

Retail Pharmacists in the United States Are Affected by Voluntary Health Insurance Plans

Health Insurance

by *Thomas P. Weil and Ugo F. Caruso*

Recently a vice president of a national electrical appliance company walked into a New York City pharmacy to have a prescription filled for an antibiotic. The young executive asked for a signed receipt, explaining that he would be partially reimbursed by his insurance company for the $10 prescription. The pharmacist was completely unaware that such insurance coverage existed, and he was naturally curious about how these new health insurance contracts would affect him. He was interested because this type of insurance coverage might conceivably have a considerable influence on the future development of retail pharmacy in the United States. An increase in the number of individuals who have insurance benefits which pay for prescriptions might be beneficial to his business as well as his customers.

As of May 1, 1956, there were 10,000,000 individuals in the United States covered by major medical expense or "comprehensive" insurance.[1] The enrollment in these plans is growing at a rate unprecedented by any former service or indemnity type of health insurance. Major medical expense and "comprehensive" plans not only help the insured meet his hospital and surgical expenses, but also pay a major portion of the prescription bills incurred in retail drug outlets. The only requirement for benefits is that the drug is prescribed by a licensed physician.

Two important features of major medical expense and "comprehensive" insurance should be discussed. First, each policy has a "deductible" clause ($25–$100) similar to that of automobile collision insurance. Since it costs the insurance company approximately $2.25 to process a $5.00 claim, it would be uneconomical to include small routine charges in the benefits provided to the patient. The added expense of processing minimal charges would be added to the premium paid by the insured and would make the cost of coverage prohibitive. A second feature, that of "co-insurance," has also been incorporated into most plans to assure that the individual will have a financial interest in the cost of his own medical care. The insurance carrier pays 75%–80% of the costs; the remaining 20%–25% is paid by the individual. The vice president with the $10.00 antibiotic bill, if his deductible had been used up, would receive an $8.00 reimbursement (80%–20% "co-insurance" feature) from the insurance company. The remaining $2.00 would have been the net cost to the executive for that particular prescription. It is hoped that this "co-insurance" feature will serve as a control on the individual's purchases from the pharmacy.

Free Choice of Pharmacy

The ideal physician-pharmacist relationship is one in which the patient receives a prescription from his physician and has it filled at the pharmacy of his choice. One pharmacy thereby competes on an equal basis with all other pharmacies in the community. These newer health insurance plans leave the choice of a pharmacy entirely to the discretion of the policyholder. Also, there are no restrictions on either the constituents of the prescription or the professional fee the pharmacist wishes to charge the patient.

The insurance contract is entirely between the insured (the patient) and the insurer (insurance underwriter). Retail pharmacists do not need to worry about having to submit bills periodically to the insurance companies, as in the case of prescriptions paid for by public welfare agencies. The bill is paid by the customer on receipt of the prescription as though no insurance existed. The insured customer then submits his claim to the company. A signed receipt from the pharmacist is the only necessary proof that the transaction has taken place.

Recent Developments in Great Britain

A review of some of the recent developments and experiences of the pharmaceutical profession in England under the National Health Service seems worthwhile to point out the advantages of having a voluntary health insurance scheme in the United States. On December 1, 1956, a special one shilling ($0.14) tax was added for each item on the prescription filled.[2] This tax is expected to provide an additional revenue of $14,000,000 annually for the Ministry of Health. However, there

[1] Health Insurance Council: *The Extent of Voluntary Health Insurance Coverage in the United States* (May 1, 1957).

[2] National Health Service, *Pharm. J.* (Great Britain), **177**, 437 (Dec. 8, 1956).

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has been some speculation that the tax will adversely affect the older segment of the population, including the chronically ill who can least afford this additional fee for medications. The Ministry recently invited the British Medical Association, "to enquire into the over-all cost of prescribing, the objective being to devise means whereby doctors could be encouraged to prescribe inexpensively."[3] This might be interpreted by the medical profession as an attempt to control the kind and quality of drugs prescribed by the doctor, which, in turn, may lower the standards of medical care available to the patient.

The AMERICAN PHARMACEUTICAL ASSOCIATION recently took a very strong stand against compulsory national health insurance.[4] The pharmacists in this country are fearful of the establishment of nationalized medicine in the United States. In such a system retail pharmacy and the drug industry may, in due course, be controlled by the national government. The importation of drugs from other countries usually is controlled by Governmental agencies in a system of state medicine. Another problem is that of credit between the pharmaceutical house, the retail pharmacy, and the Ministry of Health.[5] Pharmacists in this country agree that compulsory nationalized health insurance would be inconsistent with our system of free enterprise.

Control

Those interested in prepaid medical care programs are concerned with the problem of having adequate controls against the possible abuses of the overutilization of health insurance benefits. Most of the insurance companies have stated that their experience to date with these newer plans generally has been favorable. They realized that the "coinsurance" feature would have no value if a few rolls of color film or razor blades were added to the patient's bill. If the pharmacist allowed the customer to abuse benefits for prescriptions, either pharmaceutical drugs would be dropped from coverage by these plans or the premiums would be raised to a point where eventually only the wealthy could afford this type of insurance. The philosophy of, "Shoot the works; the patient has Blue Cross," will only bring about higher premium charges for health insurance.[6]

In this country, pharmacies frequently are located in or near medical buildings, doctor's offices, and hospitals. In very rare instances where "unethical" doctors have an understanding with local pharmacists or part ownership in pharmacies the problem of preventing inflated drug bills is even greater. Pharmacies are located in most of the medical group centers of the Health Insurance Plan of Greater New York (HIP) for the convenience of the patients. Such pharmacies, however, "shall not be owned by the group nor may the group share, directly or indirectly, in the profits of such a pharmacy. Rental of space to pharmacies on a fixed annual basis is permissible."[7] Such a policy certainly would satisfy the ethical standards of the American Medical Association and the AMERICAN PHARMACEUTICAL ASSOCIATION.

[3] National Health Service, *Pharm. J.* (Great Britain), **178**, 41(Jan. 19, 1957).
[4] APhA House of Delegates Resolution, THIS JOURNAL, **15**, 636(Oct. 1954).
[5] National Health Service, *Pharm. J.* (Great Britain), **178**, 91(Feb. 9, 1957).
[6] Zugich, J. J., *Am. Profess. Pharmacist*, **19**, 126 (Feb. 1953).
[7] Professional Standards for Medical Groups, Health Insurance Plan of Greater New York, June 1955.

SUMMARY

Major medical and "comprehensive" insurance is increasing at an unprecedented rate in the United States in comparison with former types of health insurance. Prescriptions of licensed physicians which may be filled in retail pharmacies are covered by these new plans. The physician is not restricted to his choice of drugs, and there is no set schedule of prices for the pharmacist to follow. The problem of control appears to be inherent in plans of this type. The ethical codes of the American Medical Association and the American Pharmaceutical Association should be upheld by those physicians and pharmacists participating in prepaid health insurance plans.

If major medical expense and "comprehensive" insurance plans are to be successful and effective, there must be mutual understanding between the local physicians and pharmacists of the purposes and possible abuses of these plans. Blue Cross and Blue Shield agencies which give medications as a benefit following discharge from the hospital will help the patient meet his medical care expenses. Major medical expense and "comprehensive" insurance may provide the answer to prepayment of pharmacy bills under a voluntary organization and thereby serve as a benefit both to the patient and the retail pharmacist.

Blue Cross and Blue Shield

In December 1955, Delaware Blue Cross-Blue Shield added medications after the patient is discharged from the hospital as part of their extended benefits indorsement to the regular contract. In most cases the medications are supplied by retail pharmacists and there has been excellent cooperation from local pharmacies. Other Blue Cross and Blue Shield plans are considering following this pattern. This benefit helps the patient meet his prescription expenses.

Responsibilities of Pharmaceutical Associations

When a major medical expense or "comprehensive" plan is instituted in a major industry in the community, the plant physician and/or the personnel manager should meet with the local pharmaceutical association to explain the benefits of the company program. It is then up to the association to help curb the possible abuses that may creep into the program. The cost of pharmaceutical bills may be considered negligible in comparison to hospital expenses and surgical fees. However, rather than raise the premiums to meet the added expenses, the insurance carrier might drop the prescription coverage. Instances of flagrant overcharges have been rather rare, but the continuous upgrading of prices is sometimes less conspicuous. A gradual inflationary trend of medical care expenses may bring unnecessary hardship to those in the community not covered by the plan. There must be intelligent understanding and cooperation among doctors, pharmacists, and insurance carriers to curb possible abuses and make these plans effective and successful.

According to a national health survey by Anderson in 1953,[8] $1,500,000,000 was spent annually for pharmaceutical purchases by the consumer. This was 15% of the estimated national total gross charges incurred by families for personal health services. At present 118,000,000 individuals in the United States are covered by some type of hospitalization insurance.[1] It is conceivable that in the next 5 to 10 years over 100,000,000 individuals will be covered by prepaid health plans similar to major medical expense or "comprehensive" insurance. This would mean that approximately two-thirds of the people in the United States would be able to prepay their pharmaceutical bills without affecting the traditional relationship between the doctor, the pharmacist, and the patient. ■

[8] Anderson, O. W.: Family Medical Costs and Voluntary Health Insurance: A Nationwide Survey, McGraw-Hill, 1956.

Trademarks *are Everybody's Business*

by Leonard P. Prusak*

"There is, in this world, no task more painful than that of making a name for oneself."

JEAN de la Bruyère, the witty 17th century Frenchman who wrote these words, certainly had foresight. Indeed, we are just as concerned today about our names, about our reputations, and about our standing in the community as were the folks 300 years back. From the most humble and unskilled laborer to the wealthiest and most astute businessman, there runs the common desire to enjoy the confidence and respect of one's fellow men.

Reputation and Good Will

A business enterprise is no less sensitive to its reputation than an individual. In today's competitive economy, the corporate entity is particularly aware of its susceptibility to disintegration because of nonacceptance. This is reflected in the innovation of such echelons as "Trade Relations," "Employee Relations," "Public Relations," and other departments whose purpose it is to propagate good will among the trade, the employees, and the public generally.

Business cannot survive without good will. Callmann,[1] an authority in the field of trademarks and unfair competition, has said:

Good will is a concept which will probably always perplex economists and lawyers. As an economic phenomenon it determines the competitive position of a business in the market; as a matter of accounting it is an essential element to be considered in arriving at the evaluation of a business; legally, it represents a pecuniary interest recognized as property; and as such, it must be protected. Good will in respect of reputation is a most important and vulnerable value.

Now, how does one go about building up good will? De la Bruyère said it was painful. That certainly may be true, but it is also costly, not only in terms of money but in time as well. The drug industry by its very nature relies on the products of its research laboratories to build consumer and trade good will. But it is a long way from the experimental flask to the druggist's shelf. Unlike other industries, research and development in the pharmaceutical field are solidly wedded to the public health. For this reason, before a pharmaceutical house places a new drug on the market it must take into consideration not only such matters as production and distribution costs, market potential, promotion expenditures, and competitor's positions, but also safety factors such as toxicities, dosage forms, and incompatibilities.

O-t-c versus ℞

Products emanating from pharmaceutical laboratories are generally characterized as either over-the-counter items or prescription drugs. The former have stood the test of time, are conceded to be safe for purposes of self-medication, and should be of such a nature that they can be freely entrusted to the public. The latter, either because they are inherently dangerous or because their properties are such that promiscuous self-administration by the layman may result in injury, are released to the public only under direct medical supervision.

Very few pharmacies in the United States have the distinction of surviving economically by dealing solely in prescriptions. No one will quarrel with statistics which show that the average gross profit on prescriptions is 50%. Unfortunately, the prescription volume of the average drug store is just slightly over 20%—not enough to carry the store. It takes an additional volume of 20% in proprietaries, at an average gross profit of 30%, to boost income sufficiently to pay operating expenses and bring in an adequate net profit. To remain in business, therefore, the retail pharmacist must deal actively in both proprietaries and prescription drugs.

Distinguishing Trademarks

Whether they be proprietaries or so-called "ethical" drugs, the most convenient way to distinguish the goods of one manufacturer from those of another is by their trademarks. Ideally, a trademark should be wholly arbitrary, easy to remember and phonetically pleasant, yet sufficiently distinguishable from existing trademarks to preclude confusion because of similarity. For the manufacturer who deals in world markets, there is the additional requirement that the trademark should not be offensive or derogatory in foreign languages.

The mechanics of selecting a trademark constitute a laborious and painstaking process. The problems are many. Being subjective in character, trademark selection is basically a matter of opinion. In a large corporate establishment one must necessarily recognize the views of many departments whose personnel use the company's trademarks in their daily work. The Sales Department, for example, is most directly concerned with the substance of a trademark because it is the very essence of its activity. Without trademarks the sale and distribution of products would be reduced to a state of utter confusion. Naturally, the opinion of sales personnel as to the suitability of a proposed trademark is given serious consideration. Advertising people, whose job it is to promote the company's products, are also given an opportunity to voice their sentiments. This is also true of the Clinical Investigation Division, whose staff is sensitive to the problems of the medical profession and

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* Presented to the Section on Education and Legislation, APhA, New York City Convention, April, 1957.

[1] Callmann, *Unfair Competition and Trademarks, Vol. I*, 19(1945).

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has acknowledged competency in prejudging the acceptance of a proposed trademark by physicians. To forestall the selection of a trademark which could cause legal difficulties, the law department clears the mark and negotiates its registration with the United States Patent Office. Eventually, when the drug reaches the marketing stage, production personnel become quickly acquainted with the product through the trademark which identifies it. Like the characters in *Alice in Wonderland*, ultimately everyone gets into the act.

Purposes of Trademarks

Both from the promotional and legal standpoint, a trademark has a twofold purpose. It *identifies the product per se and its source.* As time goes by and the tempo of promotional activity increases, the trademark becomes associated in the minds of the profession and the public generally with the manufacturer. It acquires synonymity with the goods which it identifies, becomes bound with its source of origin, and stands side by side with the manufacturer. More than that, the manufacturer's good will and reputation stand foursquare behind the trademark.

The result of this association is that the discriminatory prescriber or purchaser will judge the product first hand in the light of the established good will and reputation of its maker, its methods of doing business, its past ability to market products which meet standards of purity and potency, and its standing in the industry.

Trademarks and Free Enterprise

In such exercise of discretion by the consumer, the trademark plays an important part in our system of free enterprise. Every successful business must produce a product or service so satisfactory to the free-choice consumer that he will purchase it in such volume and at such a price as will compensate for the labor, materials, management and capital costs entering into it. *The free consumer thus actually directs production.* Advertising can suggest it but cannot force the consumer to buy.

Consumer preference constitutes one of the exacting tests of industrial and commercial efficiency, and it gives to the system of private enterprise a flexible and automatic check upon its successful operation. Consumer demand, both in the free national market and in the world market, fixes the character and objectives of the entire productive mechanism. Similarly, it determines not only the value of the goods but also the value of manufacturing plants, distributing organizations, and supplementary services. A manufacturing business organization which does not meet this test soon is on the way to bankruptcy.[2]

The trademark then, constitutes a regulatory process which transcends all levels of the American economy. Since competition is of cardinal importance in the scheme of private enterprise, the selection of a given product under a designated trademark, whether it be by the prescribing physician or the over-the-counter purchaser, is an inviolate right which must be recognized by the retail pharmacist. Competition operates to bring about lower prices, better products, and better services, all for the enhancement of living standards and for the promotion of the health and welfare of individuals. It is a constant incentive to research and development, to the improvement of production and distribution methods, and to the elimination of economic waste.

Disturbing Elements

It is somewhat disconcerting therefore, to find our economy disquieted by elements which, consciously or unconsciously, tend to destroy the competitive equation. There has been an increasing suspicion on the part of the retail pharmacist that *pharmaceutical manufacturers are unjustifiably flooding the retail market* with an avalanche of new products; that there is *undue multiplicity (duplication) of expensive drug items* which are inherently identical but are marketed under a variety of trademarks; that the *manufacturers are creating an artificial demand* for their respective products through hard-hitting promotion schemes and advertising efforts directed at the physician and the consumer; and that these activities on the part of the *manufacturers have placed a heavy strain on the economic operation of the independent pharmacy* because of rising inventories. To escape the ruinous onslaught of duplication, the practice of *substitution* has been conceived.

Substitution

In its most elementary sense, substitution is the sale of a product other than that which has been prescribed by the physician under its designated trademark. It is based on the notion that products which bear the same generic name have identical physical and chemical properties irrespective of their trademarks. Further, it mistakenly assumes that all manufacturing concerns have the same standards of quality control, use the same ingredients as carriers for the principal therapeutic component, and have identical manufacturing facilities.

Conversely, the practice of *substitution disregards the property rights of a manufacturer in his trademark and thus emasculates the good will and reputation which stand behind the mark.* It nullifies the dynamics of our free competitive system through arbitrary acts of single individuals who, collectively, constitute a silent yet powerful force. Substitution takes unfair advantage of the trust and confidence which have been placed in the pharmacist by the unwary purchaser and violates the physician-patient relationship. When such violations of trust and confidence are revealed to the public, it is not only the offender himself who suffers injury. His acts reflect upon the entire profession of Pharmacy.

The availability of a wide range of alternatives from which the prescribing physician or over-the-counter consumer may choose is a sign of a healthy and vigorous industry. It encourages competition among manufacturers and provides the purchaser with a better product for less money. Substitution, on the other hand, reduces competition and discourages manufacturers from placing new products on the market. It deprives the consumer of making a selection from a wide variety of trademarked products and *gives a market advantage to the unknown manufacturer who rides piggy-back on the research of others.*

Solutions Prescribed

Substitution can be reduced out of existence by the practice of sound business methods. Retail pharmacists have a history of being shrewd businessmen. They have solved many complex problems successfully by legal and ethical methods. They can solve this one simply by the exercise of judicious control of purchases and diligent liaison and cooperation with local medical practitioners. It is not necessary to stock every available brand of a given drug. Only those are needed which satisfy the demands of the physicians in the locality. By consulting those physicians who constitute the majority of their prescribers, pharmacists can not only determine the exact needs of such physicians, but can also build up their own good will and reputation by maintaining that close personal touch so necessary to the conduct of a successful and profitable retail drug enterprise. In this way everyone profits—the manufacturer, who expends vast sums of money on the research and promotion of his trademarked product; the physician, who gains confidence and respect for the retail pharmacist; and the consumer-patient who obtains the exact product for which his physician has asked. Verily, trademarks run the gamut of our American economy. They are everybody's business. ■

[2] *The American Competitive Enterprise System*, Chamber of Commerce of the United States (1946).

Third in a four part series covering the potency spectrum and uses and abuses of*

The Tranquilizers

by Ivan F. Bennett, M.D.

PART III

Meprobamate (Miltown, Equanil)

The parent substance, mephenesin, was introduced in 1946 as a muscle relaxant. It was evaluated briefly for psychiatric use. Recently it has been re-investigated. Hare, using a placebo and 1 Gm. *t.i.d.* of mephenesin, showed no significant difference in anxiety and tension in 59 patients.[106] In studying the drug with 24 patients having anxiety and tension, Scott found that 0.5 Gm. *q.i.d.* was no more effective than a placebo, but 1/2 gr. *q.i.d.* of sodium amytal was superior to either by 20%.[107] Hampson also had negative results with 105 patients in a placebo study.[108] Attempts were made to prolong its activity by blocking the hydroxy groups so it would not be so rapidly oxidized. After 1,200 chemicals, meprobamate was synthesized in 1950. Berger[109] points out that it is one of the very few simple aliphatics in medicine and that its low toxicity stems from its simple structure, with the absence of the ring structure and unsaturated linkages. It has three important properties: (1) muscle-relaxant of voluntary muscles, (2) anticonvulsant, and (3) effective in behavior changes. Its uses in neurological disorders have been investigated by several investigators.[110–115] The anticonvulsant activity has been evaluated by Perlstein.[116] This review will be limited to its effects on behavior.

Meprobamate blocks only multineuronal pathways. Simple reflex arcs, such as the knee jerk, having no interneurons, are not influenced. Its most striking property, according to Berger, is its selective action on the thalamus. Recordings from the cerebral cortex and such subcortical structures as the hypothalamus and limbic area are not affected. With larger doses, leads from the caudate nucleus show increased voltage, and in very large doses there are cortical changes. Chlorpromazine affects both the reticular activating system and the hypothalamus; reserpine the reticular activating system. Neither causes thalamic changes as seen with meprobamate. On the other hand, unlike chlorpromazine and reserpine, meprobamate has no autonomic nervous system effect.

While not originally intended for use in psychotic patients, surprising results have been found in this group. In a report by Borrus, 5 of 8 ambulatory schizophrenic individuals showed improvement,[117] while in another report by Selling only 1 of 5 had such a change.[118] Osinski noted improvement in all 4 of his ambulatory schizophrenic patients, however.[119] In hospitalized psychotic patients, Pennington had improvement in 82% with 3% discharged.[120] Tucker also noted a significant improvement of 41% in 32 hospitalized psychotic patients with anxiety and tension. They received up to 1200 mg. *q.i.d.* for 12 weeks. Thirty-one of his patients on placebo showed only 10% improvement.[121] Barsa quotes Garfinkle and Kline's study in 1954 with 25 chronic schizophrenic patients treated for 9 months with up to 2400 mg. daily. Other than a mild early sedation which rapidly disappeared, there were no beneficial changes. Four of 6 schizophrenic patients who received up to 4,000 mg. daily and 5 on 1,600 mg. daily for 3 months likewise were not influenced. He noted there was some improvement in patients previously resistant to drug therapy who were given meprobamate in combination with chlorpromazine, and he suggests a further evaluation of this.[122] Hollister, in a double blind investigation of chronic psychiatric patients observed 2 of the 15 on placebo improved compared with 13 of the 22 on meprobamate. He concluded that most mild schizophrenic patients are helped as much by meprobamate as by other drugs, and he found a small but significant number of severely ill schizophrenic individuals who were helped more by meprobamate. He recommends that no schizophrenic patient should be considered refractory to drug therapy without having had an adequate trial with meprobamate.[123] Thal[124] believed 400 mg. one hour pre-EST in 120 psychotic patients resulted in less apprehension over the treatment, less postshock confusion and headache.[124] But no such effect was seen by West, who, however, used a modified form of EST.[125]

The successful results in the treatment of anxiety and tension states in the psychoneurotic patients seen in general practice are nothing but amazing. Selling reported 95% of his 43 patients with tension improved or recovered, 90% of his 29 with anxiety,

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* Continued from the September issue.

[106] Hare, H. E., *J. Ment. Sci.*, **101**, 172(1955).

[107] Scott, P. A. L., *J. Ment. Sci.*, **101**, 163 (1955).

[108] Hampson, J. L., Rosenthal, D., and Frank, Jerome D., *Bull. Johns Hopkins*, **95**, 170(1954).

[109] Berger, F. M., *Intern. Record Med.*, **169**, 184(1956).

[110] Schlesinger, E. D., *Ann. N. Y. Acad. Sci.*, **67**, 833(1957).

[111] Neviaser, J. S., and Eisenberg, S. H., *ibid.*, **67**, 853(1957).

[112] Smith, R. T., *ibid.*, **67**, 839(1957).

[113] Gillette, H. E., *ibid.*, **67**, 859(1957).

[114] Gillette, H. E., *Intern. Record Med.*, **169**, 453(1956).

[115] Baird, H. W., Szekely, E. G., Wycis, H. T., and Spiegel, E. A., *Ann. N. Y. Acad. Sci.*, **67**, 873(1957).

[116] Perlstein, M. A., *J.A.M.A.*, **161**, 1040 (1956).

[117] Borrus, J. C., *J.A.M.A.*, **157**, 1596(1955).

[118] Selling, L. S., *J.A.M.A.*, **157**, 1594(1955).

[119] Osinski, W. A., *Intern. Record Med.*, **169**, 589(1956).

[120] Pennington, V. M., "The Effects of Six Ataraxics in Neuropsychiatric Patients." Read at the Amer. Psychosom. Soc. meeting, October 1955.

[121] Tucker, W. I., The place of Miltown in general practice, *Southern Med. J.* (in press).

[122] Barsa, J. A., and Kline, N. S., *Am. J. Psychiat.*, **112**, 1023(1956).

[123] Hollister, L. E., Elkins, H., Hiler, E. C., and St. Pierre, R., *Ann. N. Y. Acad., Sci.*, **67**, 789 (1957).

[124] Thal, N., *Diseases Nervous System*, **17**, 52 (1956).

[125] West, E. D., and Fernades da Fonseca, A., *Brit. Med. J.*, **ii**, 1206(1956).

90% of his 10 alcoholics, 30% of his 16 involutional depressions, and 60% of his 19 conversion hysteric patients. When 16 patients were transferred to placebos, at the end of the first week all complained about a return of symptoms. Borrus likewise had high rates of improvement: 42 of his 67 anxiety reactions, 5 of 5 obsessive-compulsives, 3 of 5 conversion reactions, and 4 of the 9 reactive depressives. West, in contrast, had only 58% improvement in 62 patients who were anxious and tense. In a series of 312 anxious patients studied by Osinski a large number who had failed to respond to other drugs did well with meprobamate. He discovered that the combination of meprobamate with amobarbital sodium was of greater value than either drug used alone. In a group of 113 patients, he had 94% of the anxiety states and 79% of the psychoneurotic reactions improve. Hollister believes it is as effective as any drug in the treatment of anxiety reactions. He recommends that in neurotic individuals, because of the annoying side reactions from chlorpromazine and reserpine, meprobamate be used first.

Lemere points out that the spectacular results in the severely disturbed patients with chlorpromazine and reserpine have not been seen in the less disturbed ones in private practice. Furthermore, with these powerful tranquilizers results tend to be spotty, unpredictable, and varied from one patient to the next. Many times they were ineffective in relieving symptoms and had unpleasant side effects. He obtained 70% good results with meprobamate in 250 patients. He considers it the drug of choice for the relief of tension, anxiety and insomnia. Since using it, he has discarded hypnotics for sleep.[126]

Meprobamate is considered by Phillips to be the safest and most effective drug available for the treatment of emotional disturbances in private practice. He noted improvement in 75% of his cases with anxiety, tension, insomnia and psychophysiologic symptoms. Because of the relief from anxiety, it facilitated psychotherapy.[127] Ruchwarger observed in 70 patients that those depressed with anxiety and tension, even severe and suicidal ones, were responsive to this agent when used with psychotherapy.[128] Many of Tucker's 155 patients who previously had failed to respond favorably to other drugs, responded well. In Ayd's experience meprobamate was mainly of use in anxiety of recent origin and in those with an acute situational reaction. In the chronic anxiety case it was mainly palliative. He introduces the question of placebo reactors to explain the high rate of improvement noted by others.[83] Dickel had 50% of his anxious persons denying any relief; however, objective lessening in the degree of neuromuscular tension could be demonstrated.[129] West gave meprobamate and placebo alternately to 26 patients with anxiety and tension. There was a statistically significant superiority of meprobamate over the placebo. Since the cost of this drug was 24 times that of an equivalent therapeutic dose of short-acting barbiturate, 51 patients with psychoneurosis were given either meprobamate (400 mg. dose) or sodium amylobarbitone (65 mg. dose) *t.i.d.* and 1–2 *h.s.* Benefits were about equal when either was given for short periods to patients with anxiety and tension. There was no marked difference in effectiveness. Meprobamate was preferred, however, because of its low toxicity. As can be seen there is a great need for evaluation of this tranquilizer with the cheaper sedatives using such a design.

Selling found a most dramatic recovery occurred with tension headaches with 23 of his 27 patients improving. West, on the other hand, had only 25% improved.

In a study evaluating chlorpromazine, reserpine, meprobamate, and placebos in the prevention of headaches of various types in 210 patients, Friedman found 65% of tension headache cases were relieved of emotional tension and stress associated with the onset of the headache, as compared with 46% using placebo. Of the migraine type, 55% had similar relief with the drug and 47% with placebo.[130] He emphasizes the difficulty of placebo evaluation in such an investigation. Results bear this out.

In a study of sleep patterns in hospital patients Mulinos observed 64% slept well with meprobamate as compared with 7% with a placebo.[131] In a double blind study Lasagna studied sleep patterns in chronically ill hospitalized patients using a placebo, pentobarbital (0.1–0.2 Gm.), secobarbital (0.1–0.2 Gm.), phenobarbital (0.1–0.2 Gm.), methyprylon (Noludar) (0.25–0.50 Gm.), and meprobamate (0.4–0.8 Gm.). Meprobamate resembled phenobarbital and Noludar resembled secobarbital and pentobarbital in terms of onset and duration of sleep. Phenobarbital and meprobamate, in the doses used, were equally effective.[132]

Using a double blind design Greenberg gave meprobamate or placebo to 200 alcoholics. After one week there was considerable improvement as compared with the placebo group in terms of psychomotor agitation, anxiety, irritability, insomnia, anorexia, craving, depression, and demand for medication.[133] Fox found that a combination of chlorpromazine and meprobamate was the most satisfactory method in the treatment of acute alcoholism. Other methods had included standard hypnotics (barbiturates, chloral hydrate, and paraldehyde), chlorpromazine with hypnotics, reserpine, promethazine, and meprobamate.[134] Thimann found it particularly useful during the sub-acute withdrawal stage and noted 66.9% improvement as compared to 25% with placebo.[135]

Altschul, in a study of 96 patients with psychosomatic conditions, obtained his best result in the relief of nervous tension and mild anxiety state.[136] Eisenberg was able to improve 38.5% allergic patients with meprobamate, as compared to 10% with mephenesin, 21% with reserpine, and 32% with chlorpromazine.[137] LeVan gave meprobamate to 164 patients with various skin conditions and observed a greater degree of improvement than with reserpine.[138] Meprobamate, Sokoloff noted in studying 29 dermatologic patients, had an effect unlike what he has seen following administration of any other drug.[139]

Of the 80 published papers on meprobamate reporting on 4,491 cases, according to Wyeth Laboratories 16 patients have developed urticarial or maculopapular eruptions, 1 angioneurotic edema, 12 nonthrombocytopenic purpura, 18 complained of mild gastrointestinal symptoms, and 200 of drowsiness. Side effects were transient and mild. Berger reports the incidence of skin rash is lower than that with other widely used drugs. Patients have ingested from 10 to 40 Gm. of meprobamate without fatality. Other effects, though, include headache, vertigo, syncope, fever, seizures, diplopia, and paradoxical excitement. Friedman had one patient with a severe diarrhea which was reproduced on reinstitution of one 400 mg. tablet.[140] Lemere,[141, 142] with ad-

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[126] Lemere, F., *Northwest Med.*, **54**, 1098 (1955).

[127] Phillips, R. E., *Am. Practitioner & Digest Treatment*, **7**, 1573(1956).

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[129] Dickel, H. A., Wood, J., and Dixon, H. H., *Ann. N. Y. Acad. Sci.*, **67**, 780(1957).

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[131] Cited by Berger, F. M.

[132] Lasagna, L., *J. Chronic Dis.*, **3**, 122(1956).

[133] Greenberg, L. A., Lester, D., Dora, A., Greenhouse, R., and Rosenfeld, J., *Ann. N. Y. Acad. Sci.*, **67**, 816(1957).

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[135] Thimann, J., and Gauthier, J. W., *Quart. J. Studies on Alc.*, **17**, 19(1956).

[136] Altschul, A., and Billow, B., *New York State J. Med.* (in press).

[137] Eisenberg, B. C., Paper read at the A.M.A. Convention, June 1956.

[138] LeVan, P., and Wright, E. T., *Calif. Med.*, **85**, 87(1956).

[139] Sokoloff, O. J., *A.M.A. Arch. Dermatol.*, **74**, 393(1956).

[140] Friedman, H. T., and Marmelzat, W. L., *J.A.M.A.*, **162**, 628(1956).

[141] Lemere, F., *A.M.A. Arch. Neurol. and Psychiat.*, **76**, 205(1956).

[142] Lemere, F., *J.A.M.A.*, **160**, 1431(1956).

ditional patients, has found that increasing amounts are needed to obtain the same effect. Withdrawal symptoms are experienced in some with a feeling of "nervousness" and "the jitters" or of "being let down" when the patient has missed his usual dose. Some ex-alcoholic and ex-barbiturate addicts stopped taking the drug because they felt they were becoming addicted to it. The feeling of being less tense and the exaggerated feeling of well-being, even to the point of exhilaration or euphoria, has led others to overdosage, on the basis that 3 tablets will help 3 times as much as one. Medication in 13 of over 600 patients had to be discontinued by Lemere because of excessive self-administration. Those under the influence of 6 or more tablets daily have shown evidence of being "drunk on meprobamate." One of his patients on 6.4 Gm. daily for 1 month had a convulsion 10 hours after discontinuing its use. The pattern was similar to that seen following sudden withdrawal from alcohol or barbiturates. Osinski feels withdrawal symptoms may often be due to the patient continuing unauthorized use of alcohol or barbiturates, as in his experience such a history has been uncovered when symptoms of withdrawal occurred.[143] ■

[143] Osinski, W. A., *J.A.M.A.*, 163, 489(1957).

Note

The fourth and concluding part of this article will appear in the December issue.

A Vital Question

How often are you asked: "Can you recommend a doctor for me?" This question is asked of the 110,000 registered pharmacists in this country thousands of times every day, and usually is followed by a brief description of symptoms or a general discussion of the type of medical practitioner desired.

Pharmacists are thus in a position to render a very widely-utilized service to prospective patients in their neighborhood. These pharmacists become familiar with all medical practitioners in their vicinity, the type of specialty in which each excels, the past performance and reputation of each, and the costs of medical consultation, hospitalization, and other care. By keeping these and related types of information up to date and at their fingertips, pharmacists are able to make specific and discerning recommendations to their customers concerning their selection of medical, surgical, and hospital attention.

The demand for this type of service is just one more reason for close personal relations between the pharmacist and the health personnel in the vicinity.

W. Paul Briggs to Receive 1957 Remington Honor Medal

Dr. W. Paul Briggs, of Washington, D. C., Secretary and Executive Director of the American Foundation for Pharmaceutical Education since 1951, has been selected by the past-presidents of the AMERICAN PHARMACEUTICAL ASSOCIATION to receive the 1957 award of the Remington Honor Medal. Announcement of the award was made at the office of the AMERICAN PHARMACEUTICAL ASSOCIATION in Washington, D. C. Presentation will be made at a banquet at the Hotel Roosevelt, New York, Dec. 2.

The Remington Honor Medal is generally considered to be pharmacy's highest recognition of service to the profession, and was established by the New York Branch of the AMERICAN PHARMACEUTICAL ASSOCIATION in 1918 to be given annually to the individual who has done most for American pharmacy in the previous year, or whose continuing contributions to the advancement of the profession over a period of years have been most outstanding. The jury of award consists of the past-presidents of the AMERICAN PHARMACEUTICAL ASSOCIATION, of which, at present, there are twenty.

In reviewing the basis for the selection of Dr. Briggs as the 1957 Medallist, it was pointed out that he has served American pharmacy constructively in various capacities over a long period of years as an educator, administrator, author, and leader in the development of permanent financial support for the education of pharmacists.

Dr. Briggs obtained his pharmaceutical education at George Washington University in Washington, D. C., and did graduate work at the University of Maryland, leading to the degree of Master of Science. In 1947, the Philadelphia College of Pharmacy and Science conferred upon him the honorary degree of Doctor of Science, and in 1951 Temple University honored him with an LL.D. degree.

Dr. Briggs became a registered pharmacist in 1924 and operated his own retail pharmacy from 1925 to 1927. From 1927 to 1947 he served as a member of the faculty of the College of Pharmacy of George Washington University. From 1932 to 1947 he was Dean of the School of Pharmacy and he has been a professorial lecturer since that time. During his deanship, the School of Pharmacy enjoyed a healthy growth in numbers of students and acquired its own building. In 1954 he became the recipient of the George Washington University Citation, and in 1955 he was the recipient of the George Washington University Alumni Achievement Award.

Dr. Briggs served in the U. S. Naval Reserve from 1942 to 1945, advancing from Lieutenant to Commander during that period. In 1945 he was the recipient of the Secretary of Navy Citation. From 1946 to 1947 he was Director of the Pharmacy Division of the Veterans Administration, where he rendered signal service to the profession of pharmacy and to the government in the inauguration of the pharmacy service as a part of the "home medical care program" for war veterans. The development of pharmacy service in the Veterans Administration has been pointed to as a model for other government pharmacy services and has had general approval of the profession.

From 1948 to 1951, Commander Briggs headed the Pharmacy Service of the Medical Service Corps of the U.S. Navy, relinquishing this post in order to become Secretary and Executive Director of the American Foundation for Pharmaceutical Education, a position which he has held ever since.

Much of the recent development of the Foundation has been due to the diligence and effective spokesmanship exercised by Dr. Briggs in behalf of building up the funds of the American Foundation for Pharmaceutical Education which are allocated to undergraduate scholarships and graduate fellowships as well as to the support of such important educational projects as the work of the American Council on Pharmaceutical Education, the American Journal of Pharmaceutical Education, and the preparation of teachers for colleges of pharmacy and research workers for the drug industry.

In addition to his outstanding contributions to the development of the Foundation, Dr. Briggs also serves as Treasurer of the U. S. Pharmacopeia Board of Trustees and consultant to the Chief Medical Director of the Veterans Administration. He is frequently called upon to address important professional and interprofessional audiences where representation of pharmacy as a member of the health and medical care team is essential.

Dr. Briggs was a member of the Committee on The Pharmaceutical Survey, and he is the author of *Briggs' Systematic Prescription Pricing Digest* and a co-author of the 1949 edition of *American Pharmacy*. He has contributed numerous papers on pharmaceutical education, history, prescription pricing, student recruitment, and contemporary pharmacy, to a wide range of publications.

Dr. Briggs will be the 34th recipient of the Remington Honor Medal.

Qualifications required by Pharmacists for Licensure specifically include

Practical Experience

*by Wilbur E. Powers**

In drawing the first pharmacy acts, it was important to set down some qualifications for licensure. This was the means by which the public health and safety would henceforth be protected in making certain that the compounding of prescriptions and the manufacture, packaging, and sale of certain drugs would be performed by trained individuals.

Apprenticeship Requirements

Simply to require experience working in a pharmacy for a certain number of years would have not been sufficient, for then a porter, who had done nothing but clean and sweep, could qualify for licensure or to take the examinations. The designation of "practical experience" was therefore created, and it was intended that an applicant for registration must have worked a certain period of time, usually 4 years, under the supervision of a pharmacist filling prescriptions and performing other pharmaceutical activities. After all, the whole idea was to train an individual so that he could be entrusted to fill prescriptions and to prepare medicines and package drugs safely. In other words, they were attempting to eliminate the conditions which existed during those years when anyone, including the porter, could render pharmaceutical services with little or no training.

Usually the individual obtaining the experience was designated as an apprentice, and he was said to be serving an apprenticeship, which is a throwback to the training system existing for centuries in many of the crafts. It did serve the purpose, however, and for many years this was the only educational requirement, if it can be termed as such, in effect in most states.

College Requirements

As colleges of pharmacy were established, the various pharmacy laws were amended to permit boards of pharmacy to grant credit against the practical experience requirement for an equal time spent in a college of pharmacy, and gradually college prerequisites were adopted. First there was the 2-year course required as early as 1906 in Pennsylvania. This was a requirement subsequently in many states lasting until 1925 with many colleges operating on a 3-day week so the students could work several full days each week. From 1925 to 1932, we had the 3-year course; then the 4-year course; and now in a number of colleges the 5-year course; and in two a 6-year course.

Practical Experience Requirements

The practical experience requirement has become in most states one year, but the variations are many. I believe there is one state board not requiring any practical experience; one requires 2 years; one only 1,000 hours; and the balance a year, varying from 1,900 to 2,496 hours. About 20 boards permit all of the experience to be obtained before entering the college of pharmacy; 9 limit it to after graduation from high school; and 6 do not grant more than 3 months' credit for experience obtained prior to entering the college of pharmacy. I believe there are 17 states in which no experience may be obtained prior to entering the college of pharmacy. Of these, 5 boards require 6 months or 26 weeks after graduation, and in 2 states, Montana and New Jersey, the entire year of experience must be obtained subsequent to graduation from the college of pharmacy.

You will note there is a slow trend toward requiring some experience after graduation, but when you consider that the first post-graduation experience prerequisite became mandatory in New Jersey in 1936, it is truly slow motion. Hindsight is always better than foresight, and perhaps if New Jersey had led the way in stages, we would at least have a uniform requirement today in all of our states necessitating at least a few months of experience after graduation from the college of pharmacy.

The question which we continually discuss but do not seem to answer is whether practical experience is of value today, how much is required, and when shall it be obtained. I made a recommendation in my NABP presidential address last year that each board make a survey of pharmacists in its state to attempt to obtain the answer. I was happy to see this adopted in the form of a resolution. From preliminary information available before I wrote this paper, it would seem that pharmacists generally believe that the practical experience requirement is still of great importance, and in many areas the majority feel that some experience should be obtained after graduation and prior to registration. However, the 5-year program, soon to be a minimum requirement in the colleges, is influencing the States to lower postgraduate experience requirements.

The principal objection I have noted over the years has been that the requirement often is of little value as the

* Presented to the Student Section, APhA New York Convention, April 30, 1957.

WILBUR E. POWERS, Secretary of the National Pharmaceutical Council, served 15 years with the New Jersey Board of Pharmacy, during the last 10 of which he was Secretary. He was President of the National Association of Boards of Pharmacy during 1955–1956. He is a graduate of the University of Michigan College of Pharmacy and a registered pharmacist in Colo. and N.J. He is now President of the Society of Mercer County Pharmacists (N.J.). New Jersey was the first state to amend its pharmacy act in 1936 to require one year of internship to be served subsequent to graduation from the four-year course in pharmacy.

student does not obtain the type of experience contemplated, and it frequently is not properly supervised. I am certain you are aware of the deficiencies, especially when the experience may have been obtained prior to entering a college of pharmacy and the prospective pharmacist is working as a delivery boy or counter clerk and rarely is permitted in the prescription department.

Internship Requirements

To improve upon this situation, the New Jersey Pharmacy Act was amended in 1936 to require that the full year of experience be obtained after graduation from the college of pharmacy, and a large number of regulations were promulgated to assure that the intern obtained sufficient practical experience in the compounding of prescriptions.

In New Jersey, a pharmacy is not approved for internship training unless it ranks in the top half in volume of prescription compounding in the county in which it is located. Usually no pharmacy is now approved for such training unless a minimum of 5,000 prescriptions is filled per year, and each intern must personally compound under the supervision of his preceptor a minimum of 2,000 prescriptions during the year of internship training. The preceptor must have a clear record of law observance and must have been registered as a pharmacist for at least 5 years. The intern must during the year visit physicians, dentists, and other practitioners, the health department, or a member of the board of health; report quarterly to the board; make prescription studies; and fulfill other requirements. Similar regulations have now been adopted by many boards, and most require the submission of a notebook by the intern covering his progress. However, in spite of these regulations there is a feeling that many interns are not being fully trained and that the program is deficient in many states.

Controlled Experience

In Wisconsin, a great deal of attention is being given to the proposal of controlled experience, and Dr. Louis W. Busse of the staff of the School of Pharmacy at the University of Wisconsin has given many speeches on the subject. He has recommended that the program be supervised by the colleges of pharmacy in each state. However, he stated recently that they are primarily concerned with the reception and adoption of a program of controlled experience rather than taking issue over the administrative aspects. He made a very significant statement not long ago which I would like to quote:

"The argument for the necessity of a controlled experience requirement seems to me to strike at the very heart of the profession. Pharmacy is a profession where certain technical and manipulative skills are necessary qualifications for the good practice of the profession, where mature judgment is essential in matters sometimes influencing life or death, where decisions regarding medication on an interprofessional basis are made, where matters of an extremely confidential nature between physician, patient and pharmacist are always present, and where professional relationship with the public and interprofessional relationships of all types are entered into. In addition, a body of knowledge is considered to exist in the practice of the profession which does not and probably should not exist in the academic area and which should be learned from actual experience. I believe that if we are to have Pharmacy practiced at a relatively high level throughout the profession, this area of education will have to be given the same serious attention that the academic area has been given these past 10 years."

His proposal certainly should be explored, keeping in mind that the same end result can be achieved often through different approaches, depending upon the situation in given states. For example, a college-supervised internship would not be possible in those few states where there is no college of pharmacy and might be too complicated in a state with several colleges of pharmacy. However, the development of better training and supervision, no matter how obtained, is the objective we must seek.

Those of us who have had experience in a postgraduate internship with certain controls are wholeheartedly in favor of it. In New Jersey, we are inclined to suggest that 6 months of experience after graduation is sufficient if the program is properly controlled and the intern is properly supervised by a preceptor doing the job intended. The remaining 6 months of experience could be obtained under less exacting circumstances during the summer recesses while attending a college of pharmacy.

Current Opinion

It will be of interest here to comment upon a survey made of New Jersey interns and preceptors somewhat over a year ago by the board of pharmacy. Of the 82 preceptors reporting, 76 felt that the present 1 year of internship should be continued in New Jersey, and the remaining 6 were of the opinion that it should be reduced to 6 months. However, it should be pointed out that most of our preceptors are pharmacy owners who continuously train interns. If the requirement is decreased to 6 months, there would be a few months during the early part of each year when few interns would be available as most would have become registered shortly after completing the six-month-postgraduate period. It would appear that this probably had some influence on their thinking.

Even though only 5 of 74 interns reporting had obtained no experience in a pharmacy prior to graduation from the college of pharmacy, 36 felt that the full year of internship should be continued, and there was none who felt that the requirement should be reduced to less than 6 months after graduation. It should be emphasized that those reporting had already completed 6 months of experience after graduation when sending in these anonymous questionnaires. Certainly they must have been of the opinion that a postgraduate internship is important.

Argument after argument could be cited; but the answer lies entirely in the hands of the recent graduates who can easily settle this matter once and for all if they wish. They will become registered soon after graduation, and will know then whether they are fully qualified to practice pharmacy. It is suggested that each note briefly his trials and tribulations and indicate in some kind of a permanent record or diary whether he was able to take care of every situation and whether he could actually conduct by himself a pharmacy with a satisfactory prescription volume the day he was granted registration. If not, he will have proved for himself the value of practical experience after graduation. When the problem comes up in his state, as it surely will, he should step forward and make his observations as the expert he will be. I am certain he will be heard because graduates of even a few years before who have not made a record will not remember how green they actually were. It will be no reflection upon his college or himself if he admits he was not fully trained when he became registered, but it will only be a presentation of facts which many of us have already discovered.

We are a self-governing profession. If we are to serve and protect the public as we are charged, we must make these decisions for ourselves and then have the courage and wisdom to follow through. If we do not carry out our obligations, others may take over the responsibility. Such projects can be best furthered through our pharmaceutical associations and it is our duty to our profession and the public to be active in our associations at every level. Only in this way can we discharge our responsibilities and justify the trust the public has placed in us to permit self government through our boards of pharmacy, the members of which are in most states recommended by registered pharmacists through their state associations. ■

Freedom for pharmacists and new profits for proprietors of pharmacies are obtained by distributing pharmaceutical sundries in streamlined operations by the techniques of

Self-Service

by L. A. St. John

DRUG store remodeling today almost demands the new ideas and innovations of layout, design, and merchandising which are typical of the self-service or mass merchandising operation. And with good reason. There are still many drug stores which are experiencing the problems that occur when the tail starts wagging the dog. That is, that the sundry departments of their drug stores (which were started as an adjunct to the pharmacy proper, largely as a convenience and service to customers) are demanding too much time, effort, or cost in managing. Proof of this fact is seen in the net profit figures which have decreased from 8.6% to 4.9% for this type of operation. The remedy for this problem may well be the change to the mass merchandise or self-selection type of sundry operation. Why? Because experience has proved that self-selection frees the pharmacist from clerking and supervisory duties in the sundry departments, and *permits him to spend a much greater part of his time in his professional capacity in the pharmacy itself.*

Trend toward Efficiency

The trend to self-service or self-selection—often called mass merchandising—is probably the most widely recognized trend today. This is true not only in the sundry departments of drug stores but in almost every field of retail operation. Self-service today has become a true science, worthy of a thorough and intelligent study by all progressive businessmen in the drug store field.

Does a change to self-service mean a wholesale firing of all sales personnel? Definitely not! It *does* mean a re-education of salespeople, a change in selling habits and practices, and the potential of a great sales increase with no added overhead.

Real success in self-service is reached when the proper balance between service and self-selection exists. It is important to retain the advantages of service and selling, while at the same time capitalizing upon the psychological advantages of self-service—as well as the material advantages.

What are the psychological advantages of self-service? It means that the customer can find what he or she wants with greater convenience, without waiting. The customer can "shop"—compare prices and merchandise, can make his choice without influence or pressure. Items the customer may want but perhaps has forgotten are suggested by proven methods of planned open displays. A properly set up self-service store means clean, pleasant shopping; it means shopping enjoyment for the customer because of the greater selection and assurance of merchandise being in stock.

What are the material advantages? There are many advantages to the alert drug store operator. First, self-service means a more efficient store operation, a more profitable one. Self-service allows the operator to serve more customers with no increase in personnel. Many tedious clerking jobs are eliminated, providing more time for professional service. Lower overhead and easier maintenance are other advantages And, very importantly, it means the drug store operator can have more usable space without increasing the size of his store because he will utilize every foot to greater advantage.

Naturally, the more attractive the store is, the greater percentage of customer traffic. Self-service stores are utilizing effective and dramatic displays to make their layouts more attractive. There is a greatly increased use of special displays, carefully located, to feature certain lines of merchandise throughout the stores. The key to developing plus sales volume on drug store sundries may lie very close to the use of modern facilities for attractive display purposes. Mass displays, for instance, are known to attract the customer's eye—and these are used extensively in self-service stores. Clever fixture designing and arrangement can contribute much to better displays, and flexibility in fixtures allows for extra effectiveness in seasonal displays, as well as for general use. The use of motion and color to create a store personality is on the increase, creating a new look for the customer. Effective wall displays also help to create an atmosphere which does much to overcome the supermarket appearance.

There is a tremendous sales appeal in a clean, well-lighted self-service store with masses of merchandise and real showmanship in displays. A bright and cheerful salesroom with easily accessible merchandise invites people into the store.

Prescription Departments Being Emphasized

Of particular importance in the drug store field is the current trend toward the emphasis of the prescription department, i.e., the *pharmacy* which is, after all, the big reason why a store is called a drug store. This emphasis is being accomplished by enlarging and featuring the pharmacy in the drug store in order to maintain and develop the drug store identity. One new arrangement gaining favor is the enclosed prescription section, which in many new self-service stores is designed to dominate the entire store layout, while at the same time retaining its professional integrity as *the pharmacy*.

Elevation of the prescription department, or possible relocation may be

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the means of this dominant appearance. Many smaller drug stores are finding that better control may be maintained by placing the prescription department at the front of the store. This gives immediate identification, and has the added advantages of allowing the pharmacist in charge to oversee the entire store and to see all customers entering and leaving the store. Other stores are continuing to place the prescription department at the rear of the store with well defined traffic lanes and an attractive, efficient looking department to draw attention to this all-important service.

When one realizes that in the past 15 years, the average prescription price has changed from approximately 60¢ to well over $2.50, it is easy to understand why the smart pharmacist capitalizes on his prescription department. And, recognizing the trend toward emphasis on this department, leading manufacturers are developing new equipment that will give greater efficiency and increased professional attractiveness. There are new cabinet-type drug shelves, for instance, which are gaining great favor with many pharmacists. These have the advantage of keeping stock clean and orderly and also imparting a highly ethical professional appearance. Bay-type shelves in back wall storage units are used by many pharmacists who prefer to have prescription stock visible at all times. Then there are drug drawer units with sturdy locks, handsomely designed to fit into the overall prescription counter.

The prescription laboratory itself must be an efficient, professional-appearing area, with a sink unit and plenty of convenient work and storage space. New units with acid and stain-proof worktops are proving popular in new installations because of their obvious advantages for pharmacists.

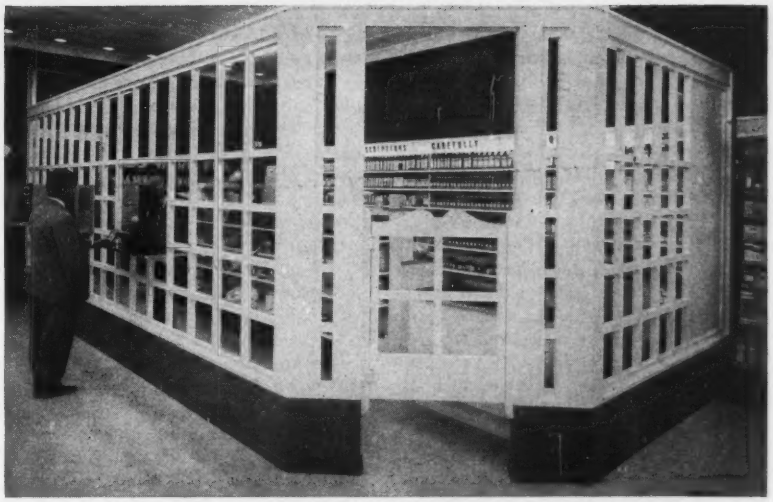
How Much Self-Selection?

Under no circumstances should drugs be distributed by self-selection methods. These methods can be applied effectively to a very high percentage of the goods sold in today's drug stores, but it is the combination of skilled sales help and self-selection which will encourage customers to make a complete tour of the store, to see as much merchandise as possible, pick up impulse items, select the larger economy sizes and be attracted by special displays.

The trend toward larger area stores is very evident today. These larger stores present opportunities for using new ideas and merchandising methods—inventories are larger, but the volume opportunities are in proportion.

What Kind of Self-Selection?

A number of things should be considered in determining the kind of self-service best suited to the particular store. Certainly the location of stores is important—whether it is in a suburban area, a downtown area, or a shopping center. The kind of competition is another important factor which will determine, to an extent, sundry stocks as well as the departments that it will pay to emphasize. The type of store the owner wishes to operate, the size and general character also deserve consideration. Company policies will dictate the type and extent of self-service which is practical and possible for the individual store or chain.



This prescription department, located near the front entrance to the Sun Drug, Natrona Heights, Tarentum, Pa., is a good example of the current trend to feature and emphasize the pharmacy in the drug store. Customers can pick up prescriptions at the opening as shown or can enter the department through the half gate door. (Photo courtesy Bulman Corporation.)

Whatever type of self-service is the ultimate goal, current trends indicate the wisdom of intelligent, practical engineering of fixtures and layouts. Correct planning is the operator's best assurance that the principles of self-service can be integrated properly into the overall merchandising pattern to achieve the best results on a local basis. Probably the best operation will be neither completely self-service nor completely service.

The basic principles of mass-merchandising or self-service will remain the same, however. For instance, there is a definite trend toward the direction of store traffic through engineered layouts which help to persuade the customer to shop the entire store. This "engineering" allows for a better control of the traffic flow as it relates to a specific store operation. The trend involves deviating from the complete streamlined free-flow pattern to what is called "grid patterning" in certain areas. By strategic location and engineered fixture and layout design, the traffic flow can be slowed up in definite areas and detained for selling in such departments as cosmetics, for instance, which lend themselves to individual service.

In self-selection drug stores, particularly as they become larger, we run the risk of having the store only partially shopped at too rapid a rate. The properly engineered layout can correct that tendency—breaking up the overall monotony of mechanical regularity of displays.

How can this traffic control be achieved? There are three important ways: (1) By fixture placement; (2) by location of departments and merchandise; and (3) by use of lights and color. Better engineered traffic control recognizes these features.

Although pilferage is reported generally no higher in the self-service store than in a service store, it is important to consider that this also can be controlled through good layout and the use of low fixtures with greater visibility. And even in those few cases where a small increase might occur, it would be more than covered by the decreased cost of doing business and the increased volume resulting from this type of operation.

High Gross Departments

Many of the newer self-selection drug stores are strongly featuring and extending the areas of such high gross departments as cosmetics, baby needs, first aid supplies, cameras, pesticides, toilet articles, gifts, greeting cards, and dietetic needs. Of particular importance among these is the cosmetic department which should be primarily a serviced department. Strategic location of this department can do much to answer the common objection that self-selection stores look too much like supermarkets and lack selling punch.

Ample stocks and tasteful cosmetic

displays will always be magnets for women shoppers. Add to these the strong stress which is currently being laid on the professional knowledge of cosmeticians who can give authoritative advice and service to customers, and you have a strong impetus for increased sales. This emphasis on the cosmetic department is one of the most important recent changes in self-selection drug stores—certainly worthy of consideration in view of the fact that a woman spends 50% more money on the average visit to the drug store than a man.

Another high gross department being given more emphasis is the *greeting card* department. Properly located and dramatized, this department can become one of the most strategic spots in the store. Many retailers feel—and with some justification—that more greeting cards can be sold when the department is located in the front of the store than when it is in a rear location. However, a good lively greeting card department located at the rear of the store can be an excellent traffic puller, drawing customers through displays of less active merchandise and exposing them to impulse buying. Many retailers say that the great overall store volume more than compensates for some loss of business in the greeting card department itself.

Current reports indicate that this increased emphasis on location and departmentalization of high gross departments has resulted in increased volumes ranging to as much as 150%.

Proper layout and fixtures play an important part in this increase of volume. Some retailers are using conventional floor cases in front of the wall shelving, but the new front opening glass cases inserted in the wall shelving have the advantage of eliminating dead aisle space.

Pre-Sold Merchandise Important Selling Tool

One of the basic principles in successful self-selection merchandising is the use of pre-sold items. Retailers can profit from the power of pre-sold merchandise if their stores are designed to take the full advantage of this pre-established desire for the product. This desire is built up constantly by manufacturers through all the facilities of advertising. Television, magazines, newspapers, radio, and outdoor billboards carry thousands of buying messages prompting the customer to choose a particular product. This power of self-movement can be very vital in the operation of a self-service drug store. Retailers have found they can profit from this tremendous demand by featuring prominently the products that have built-in selling powers.

Take, for example, mass displays of dental needs which can stimulate a quick recollection of product commercials which the customer repeatedly sees flickering across the TV screen. Perhaps the customer passing your display subconsciously hears that TV announcer claiming that a certain toothpaste "sweetens your breath as it cleans your teeth," while from adjoining shelves a mouth wash claims to do the breath-sweetening job eight times as well as the toothpaste.

This type of pre-sold merchandise has a lower profit margin perhaps, but the more rapid turnover resulting from recognition of the brand name by the customer more than makes up for the difference. Unknown merchandise requires a salesperson to sell it. Pre-sold merchandise will move itself.

The proper displaying of pre-sold merchandise is of prime importance. Many net profit dollars are being wasted by merchandisers who display pre-sold merchandise in a showcase or hide it behind the counter and pay a salesperson to sell it again. This operator is actually burdened with dual selling costs. First, the cost reflected in the lower profit; and secondly, the cost of handling and selling the article through personal service. By openly displaying pre-sold items for the customer's easy selection, this dual selling cost is eliminated.

Too often merchandise is displayed so that it is clearly visible to the customers but behind a barrier of glass that is as effective as a brick wall in eliminating sales. Why? Because the "glass curtain" of the glass showcase keeps out the customer. True, it keeps dirt from merchandise, but at too great a cost for an alert profit-minded merchant. The glass showcase has cost retailers of America, and continues to cost many, hundreds of millions of dollars in lost business each year. This is a kind of restraint of trade which the retailer imposes upon himself and at the same time places a limit on the potential volume of his store.

Efficient Stock Control Vital

Another basic principle of mass merchandising for the self-selection drug store is the establishment of an efficient stock control and replacement system. Merchandise must move at a continuing pace from the manufacturing line to the store's shelves. Buying systems must be tailored and simplified, and fast means of transportation must be used. Warehousing facilities must be improved, and systems for moving stock within the store must be streamlined.

There are good sound reasons for these improvements. First, new engineered fixtures display more merchandise. It follows that stock rooms can be, and are, smaller. Turnover is faster in this type of operation and run-outs occur with little advance notice. Quick replacement of merchandise must be made, or sales will be lost.

In mass-merchandising self-service stores, the customer's eyes are drawn immediately to the selling shelves. Merchandise must be moved quickly to these shelves to keep them well filled, attractive and eye-appealing for top selling effectiveness. In many cases, reserve stocks are maintained close to the actual display, and stock room supplies are either reduced to a minimum or eliminated entirely. Experiences have proved that when stock is maintained in two separate locations—the shelves and stock room—not only do ordering procedures become complicated, but the movement of merchandise from the receiving room to the sales floor is slowed up, requiring expensive handling costs.

Price Appeal Important Factor

Speeding the movement of customers into your store is another basic principle of mass merchandising. Traffic is, of course, of first consideration since the entire philosophy of mass merchandising depends on traffic. Price appeal is one of the most important factors in moving customers into your store. This is the appeal which is responsible for moving large amounts of retail traffic into mass merchandise stores. Good selections of good items at good prices is always a good formula for mass merchandising sales.

Proprietors have learned, however, that mass display of bargain banners at the entrance produces a cluttered appearance which detracts from the clean, neat, attractive atmosphere of the drug store and actually repels some customers.

Tie-in Displays Increase Sales

Many successful retail pharmacists have grown away from traditional merchandise groupings in order to stimulate additional traffic flow and increase impulse sales by grouping merchandise according to use rather than category. For instance, antiseptic mouth washes are being placed next to tooth paste displays, as well as in their own antiseptic section. Baby cough syrup will be found in both the cough syrup section and the infants department.

This trend is carried out with merchandise in other departments as well.

In the problem of building up the appeal of mass merchandise, nothing is more important than the proper use of space. A standard flat top table, for instance, will provide $12\frac{1}{2}$ square feet of display space, while a shelf display using the same amount of floor space provides 45 square feet of display area. Gondola-type floor islands are becoming popular because they can increase the display capacity of a given area as much as 300% by taking advantage of the

cubic footage in display rather than square footage. In successful mass merchandising display, capacity is increased by utilizing space that was simply dead space in the conventional operation.

Mass merchandisers are removing showcases wherever possible and creating open displays which are inviting and can be serviced by salespeople. An item such as bathroom scales, for instance, on an open display probably would still be sold by salespeople; yet, the display itself can stimulate the desire and need for scales and in some cases will result in purchase without sales assistance.

One trend in layout is the trend away from the old bull-pen front end. Those operators who are still using the bull-pen lobbies say they create a busy front end atmosphere and also allow customers to make quick accommodation purchases. Much more recent developments, however, have indicated a decided preference for the free lobby. Advocates of the free lobby entrance are basically concerned with an open, unobstructed entrance to the store—providing a clear view of displays and inviting the public in.

Then there is the very significant move toward establishing independent and efficient checkout systems. The purpose of the checkout is, of course, to collect money for purchases already made. Most progressive stores are keeping the checkout areas clean and streamlined. This avoids congestion and speeds up customer service, leaving customers with a good last impression.

Cashiering must keep pace with shopping speed in the store. Efficient and quick systems of cashiering streamline this part of the sales transaction so that the advantages of self-selection are not destroyed when it comes time to pay for the merchandise. A well-planned, adequate and efficiently manned cashiering area is of first importance, for merchandise cannot be sold more rapidly than the money is taken in. And nothing so infuriates a customer as to have to stand, merchandise in hand, waiting for someone to take his money.

The placement of departments and merchandise within departments is particularly important in stimulating complete customer circulation. In addition to open displays, certain merchandise which might be termed "demand" or "magnetic" merchandise is distributed throughout the store to alleviate congestion and increase traffic flow.

Mass merchandise appeal is the life blood of mass merchandising stores. Customers are more interested in the merchandise itself than in anything else they see in the store. Fixturization and departmentalization must be planned in the well managed store so that a maximum of merchandise is visible. The effect must be one of unlimited access to attractive masses of products. Customers like to see, feel and inspect merchandise. This fact is at the very root of the success of new type operations.

This sweeping wall shelving in the Sun Drug Store, Great Southern Shopping Mart, Bridgeville, Pa., is a good example of the advantages provided with modern steel equipment. The shelves adjust to any desired height to display more and to save valuable space. (Photo courtesy Bulman Corporation.)

Salespeople Still Important

It is well to remember that in self-service stores, salespeople are actually more important than ever before. Salespeople should be provided for selling at peak periods, and in addition, they should be available to assist a customer whenever necessary. New techniques in selling are required for the self-service store, and salespersons should be schooled in this new science of on-the-spot service. Actually, this new way of serving people can be very simple. The customer is allowed to travel freely throughout the store, but when assistance is needed the salesperson steps in and provides it. Then he allows the customer to continue shopping alone.

When a customer enters the store he should be greeted by the salesperson. If the customer does not ask for help, he should then be left alone. Every salesperson, however, must be alert for service needs. He must watch the customer closely enough to catch the questioning look and offer service as quickly as possible. The salesperson in the self-service store never says, "May I help you?" Rather, his query should be: "Did you find what you were looking for?" When the customer wants advice or assistance, then the salesperson should use all the rules of good salesmanship to demonstrate his knowledge of the product, convince the customer, and complete the sale.

It is evident that the salesperson in the self-selection store has more time to provide assistance and to sell for two reasons. First, no unnecessary time need be spent waiting on customers who can serve themselves; second, cashiering systems are streamlined so that the time of salespeople is not occupied with these details as in conventional stores.

Some of the new self-selection stores—in smaller volume groups—are continuing to combine some selling with the check-out duties. Usually these are set up to allow the cashier to sell and check out too during the slower periods. In general, however, the separation of the cashiering function from other duties of salespeople helps improve the quality of their service. In some conventional stores it was reported that salespeople during peak periods were actually only selling 25% of the time and spending 75% of their time in wrapping, making change and other duties in completing the transaction.

It is well to remember that no one layout, plan, or policy will work for every drug store. Each must be tailored to fit the particular locale, the merchandise, the type of customer, and the space of the individual store.

Self-service is not a cure-all for management's ills. Rather, it is a manager's tool and one which is very potent. Its use starts with good management. Given that good management, the next step is to adapt the best of the current self-service trends to the individual operation. Then, intelligently engineered layouts and fixturization will assure greatest success in putting the self-service trends to work. ■

Flavor *and the* Modern Pharmaceutical

by Fred Wesley

SUMMARY

Great importance is being attached to the use of flavoring agents in pharmaceuticals because of patients' objections to unpalatable medicines, advances in flavor chemistry, sales appeal of flavored preparations, and relatively low cost of flavors. In view of the scarcity of information covering this field and its importance to the practice of pharmacy at all levels, a study was undertaken, and a comprehensive listing of flavors contained in each of 200 currently popular pharmaceuticals was obtained. The findings were then interpreted in regard to selectivity, distribution, and versatility of flavor types, with special reference to individual pharmaceutical groups. From these data it became evident that a group composed of cherry, chocolate, mint, orange, and raspberry could be considered as fully adequate in providing flavor for 93% of all preparations examined.

NOWADAYS pharmaceutical manufacturers are relying strongly on the use of flavors as disguising agents for distasteful drugs.[1] But, as far as can be ascertained, no survey has yet been published regarding the presence of specific flavor types in some sizable number of modern pharmaceuticals. To fill this void and to explore the possibility of uncovering certain facts of value for future guidance in pharmaceutical flavor work, the following study was undertaken.

Method

National pharmaceutical publications[2] for 1953, 1954, 1955, and 1956 were searched for information on the presence, in trade-named pharmaceuticals, of specifically-stated flavor types. In most cases, the pertinent data could be extracted from the so-called "New Products" sections or from advertisements in the journals. The search produced a listing of the flavor type contained in each of 200 products.

The round number of 200 derives from the fact that 1953 was surveyed in part only, allowing the sum total for 1954, 1955, and 1956 to be extended to a workable over-all total of 200 preparations, differing in active ingredients, dosage forms, or flavors. Pharmaceuticals

[1] Wesley, F., *Drug & Cosmetic Ind.*, **74**, 348(1954).
[2] *J. Am. Pharm. Assoc., Sci. Ed.*, **45**, 41(1956).

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Table I—Flavored Pharmaceuticals Surveyed

Classified Pharmaceuticals	
Vitamins[a]	43
Antibiotics[a]	40
Cough Preparations[a]	25
Sulfas[a]	12
Sulfa Antibiotics[a]	10
Antihistamines[a]	6
Piperazine Derivatives[a]	6
Barbiturates w/ Belladonna Alkaloids[a]	4
Dioctyl Sodium Sulfosuccinate Preparations[a]	4
Protein Supplements[a]	4
Antibiotics w/ Aminobenzoate[a]	3
Antibiotics w/ Vitamins[a]	3
Aspirin Preparations[a]	3
Aluminum Hydroxide Preparations[a]	2
Methyl cellulose Preparations[a]	2
Reserpine Preparations	2
Unclassifiable Pharmaceuticals	
Achrocidin Syrup (Lemon Lime)	1
Aciban Tablets (Peppermint)	1
Adjudets (Candy)[a]	1
Alurate Elixir (Grenadine Strawberry)	1
Celutropin (Citrus)[a]	1
Chlortrimeton Compound Syrup (Peach)	1
Cod Liver Oil Concentrate Tablets (Candy)[a]	1
Coricidin Pediatric Medilets[a]	1
Coricidin with Penicillin Soluble Powder[a]	1
Cortef Oral Suspension	1
Cytoferrin Liquid (Lemon Lime Candy)	1
Digoxin Elixir Pediatric (Lime)	1
Dorbane Suspension[a]	1
Dorbantyl Suspension[a]	1
Furadantin Pediatric Suspension (Coconut)[a]	1
Hydrozets[a]	1
Levsin Sulfate Elixir[a]	1
Milontin Suspension (Anise Pineapple)	1
Mol Iron Liquid (Loganberry)	1
Noctec Solution[a]	1
Noludar Elixir (Cordial)[a]	1
Nujol Magna[a]	1
Robalate Liquid[a]	1
Roniacol Elixir (Wine)	1
Senokot[a]	1
Somatovite Tablets[a]	1
Tedral Suspension (Anise Mint)	1
Thorazine Syrup (Citrus)[a]	1
Titralac Tablets[a]	1
Titralac SP Tablets (Spearmint)	1
Wychol Syrup[a]	1
Total Number of Pharmaceuticals	200

[a] These products are flavored with Candy, Cherry, Citrus, Chocolate, Cordial, Fruit, Mint, Orange, and/or Raspberry.

Table II—Flavors in Trade-Named Pharmaceuticals

Anise
- Cosadein
- Crephex Cough Syrup
- Novatrin Compound Pediatric

Apricot
- Calcidrine Syrup
- Calcidrine Troches

Banana
- Compocillin Suspension
- Compocillin V Suspension
- Tetracyn Pediatric Drops

Butter Caramel
- Sulfid Pediatric Suspension

Butterscotch
- Penasoid Suspension
- Romilar Syrup

Candy
- Clusivol Syrup
- Phenergan Troches
- Vi Aqua Therapeutic Syrup
- Wybiotic Troches

Caramel
- Incremin Tablets

Cherry
- Achromycin Pediatric Drops
- Achromycin Oral Suspension
- Achromycin Pharyngets
- Achromycin Syrup
- Ambenyl
- Aspirin Dulcet Tablets
- Cetro Cirose
- Cherrin Granules
- Cillorets
- Diovac Pediatric Syrup
- Gantricillin 200
- Incremin Drops
- Polycycline 125
- Polycycline Aqueous 250
- Polycycline Aqueous Pediatric Drops
- Polycycline Aqueous Sulfonamides
- Pyribenzamine Expectorant Ephedrine
- Readicillin
- Synkayvite CB Lozenges
- Thephorin Expectorant
- Toclase Syrup
- Toclase Expectorant
- Tricodene
- Troph Iron Liquid
- Tussar
- Vitamin Candies
- Viterra Tastitabs

Cherry Custard
- Albamycin Syrup

Chocolate
- Achromycin Dispersible Powder
- Coco Sulfonamides Triplex
- Deltamide Suspension
- Gantrisin Syrup
- Homagenets Therapeutic
- Ledinac
- Penasoid Triple Sulfas Suspension
- Protinal
- Tetracyn Oral Suspension

Chocolate Mint
- Panmycin Aquadrops
- Panmycin Syrup
- Sulfa Neolin Suspension

Cinnamon
- Pyribenzamine Elixir

Citrus
- Cologel
- Panmycin Suspension
- Polycycline Sulfa Suspension
- Pre Daylin Drops
- Sulfa Readicillin
- Vi Daylin Drops

Cocoa
- Vita Dulcets Tablets

Coconut Custard
- Katrasul
- Dramcillin 300 Suspension
- Pen Vee Suspension

Coconut Vanilla
- Co-Pyronyl Suspension

Cola
- Sustinex
- Serpasil Elixir

Crushed Fruit
- Polycycline Suspension 250

Fruit
- Buroplex Liquid
- Clistin Expectorant
- Coldene
- Cremomycin Suspension
- Mysteclin Suspension
- Panmycin Drops
- Panmycin Readimixed
- Pinisirup
- Pyraldine Expectorant
- Pyraldine Expectorant No. 2
- Stimavite Tastitabs
- Sul-Spansion
- Super Anahist Cough Syrup
- Synkayvite C Drops
- Syrasulfas Syrup
- Terramycin SF Oral Suspension
- Theragran Liquid
- V Cillin Pediatric for Suspension
- Zyma Syrup

Fruit Mint
- Tetrabon SF Suspension

Lemon
- Cillorets
- Aspirin for Children
- Tilfor

Lemon Candy
- Vi Daylin

Lemon Custard
- Ilotycin Drops

Lemon Lime
- Serpasil Elixir

Lemon Raspberry
- Vi Syneral Drops Fortified

Lime
- Bonadoxin Drops
- Brevisin Lozenges
- Benesom Elixir
- Cillorets
- Pipizan Citrate Syrup

Maple
- Liprotein
- T H & M

Mint
- Bonamine Chewing Tablets
- Cotussis
- Diovac Syrup
- Homagenets Prenatal
- Lipo Triazine Suspension
- Piperazine Wafers
- Sigmamycin Oral Suspension

Nutmeg Sassafras
- Ilotycin Sulfa Suspension

Orange
- Adcets
- Bemotinic Liquid
- Candettes
- Deca Mulcin
- Dubiotic Troches
- Fluagel
- Homagenets Pediatric
- Hydrolose Syrup Plain
- Mulcin
- Ol Vitum Drops
- Oxucide Syrup
- Paladac
- St. Joseph Aspirin Children
- Synkayvite C Lozenges
- Vi Delta Emulsion
- Vi Magna Syrup
- Vi Penta Drops

Orange Lemon Coriander
- Romilar Expectorant

Orange Mint
- Colace Syrup

Orange Peach
- Pyribenzamine Expectorant EC

Peach
- Cosanyl
- Permapen Oral Suspension
- Terrabon Homogenized Mixture
- Terrabon Pediatric Drops

Peppermint
- Achromycin Troches
- Amphojel
- Appetum Chewing Gum Tablets

Pineapple
- V Cillin Sulfa Pediatric

Raspberry
- Benylin Expectorant
- Bonadettes
- Bristalin Syrup
- Gantrisin Pediatric
- Levsin Phenobarbital Elixir
- Pincets
- Terramycin Oral Suspension
- Terramycin Pediatric Drops
- Tetrabon Suspension
- Tetracyn SF Oral Suspension

Spearmint
- Malcotran Phenobarbital Elixir

Strawberry
- Toclase Tablets
- Elkosin Suspension
- Vermizine

Strawberry Cream
- Coco Diazine Suspension

Tangerine
- Theracombin Syrup

Tutti Frutti
- Pen Vee Sulfas Suspension

Vanilla
- Homicebrin
- Optilets
- Protinal
- Vi Protinal

Vanilla Custard
- Bicillin Suspension
- Neolin Suspension

Wine
- Amino Concemin Elixir
- Cofron Elixir
- Gerix Elixir
- Gerizyme
- Gevrabon

Table III—Distribution of Individual Flavor Types Among Pharmaceutical Categories

	per cent
Antibiotics	
Cherry	22.5
Fruit	10
Banana	7.5
Peach	7.5
Raspberry	7.5
Chocolate	5.
Chocolate Mint	5.
Coconut Custard	5.
Vanilla Custard	5.
Butterscotch	2.5
Candy	2.5
Cherry Custard	2.5
Citrus	2.5
Crushed Fruit	2.5
Lemon	2.5
Lemon Custard	2.5
Lime	2.5
Mint	2.5
Peppermint	2.5
Cough Preparations	
Cherry	29.1
Fruit	16.6
Anise	8.3
Apricot	8.3
Raspberry	8.3
Butterscotch	4.2
Maple	4.2
Mint	4.2
Orange Lemon Coriander	4.2
Orange Peach	4.2
Peach	4.2
Strawberry	4.2
Sulfas	
Chocolate	25.1
Fruit	16.8
Butter Caramel	8.3
Coconut Custard	8.3
Lemon	8.3
Mint	8.3
Raspberry	8.3
Strawberry	8.3
Strawberry Cream	8.3
Sulfa Antibiotics	
Cherry	20
Citrus	20
Chocolate	10
Chocolate Mint	10
Fruit	10
Nutmeg Sassafras	10
Pineapple	10
Tutti Frutti	10
Vitamins	
Orange	25.6
Cherry	14
Fruit	11.6
Wine	11.6
Candy	4.7
Citrus	4.7
Chocolate	4.7
Vanilla	4.7
Caramel	2.3
Cocoa	2.3
Cola	2.3
Lemon Candy	2.3
Lemon Raspberry	2.3
Mint	2.3
Peppermint	2.3
Tangerine	2.3

Table IV—Percentage-wise Apportionment of Six Most Popular Flavors

	per cent
Cherry	
Antibiotics	31.1
Cough Preparations	27.7
Vitamins	20.7
Sulfa Antibiotics	6.9
Aspirin	3.4
Coricidin Pediatric Medilets	3.4
Coricidin w/ Penicil'in Soluble Powder	3.4
Dioctyl Sodium Sulfosuccinate	3.4
Chocolate	
Sulfas	27.2
Antibiotics	18.2
Vitamins	18.2
Protein Supplements	9.1
Senokot	9.1
Sulfa Antibiotics	9.1
Somatovite Tablets	9.1
Fruit	
Vitamins	28.5
Cough Preparations	23.8
Antibiotics	14.2
Sulfas	9.5
Antibiotics w/ Vitamins	4.8
Cortef Oral Suspension	4.8
Hydrozets	4.8
Piperazine Derivatives	4.8
Sulfa Antibiotics	4.8
Mint	
Antibiotics	10
Antihistamines	10
Cough Preparations	10
Dioctyl Sodium Sulfosuccinate	10
Nujol Magna	10
Piperazine Derivatives	10
Robalate Liquid	10
Sulfas	10
Titralac Tablets	10
Vitamins	10
Orange	
Vitamins	52.1
Antibiotics w/ Aminobenzoate	9.5
Aluminum Hydroxide	4.8
Aspirin	4.8
Dorbane Suspension	4.8
Dorbantyl Suspension	4.8
Levsin Elixir	4.8
Methyl Cellulose	4.8
Noctec Solution	4.8
Piperazine Derivatives	4.8
Raspberry	
Antibiotics	27.2
Cough Preparations	18.2
Antibiotic w/ Vitamins	9.1
Antihistamines	9.1
Barbiturate w/ Belladonna Alkaloids	9.1
Piperazine Derivatives	9.1
Sulfas	9.1
Wychol Syrup	9.1

merely described as "flavored" without specific mention of flavor type were omitted.

Discussion

Assembled by ingredients (Table I) and arranged in descending order of numerical memberships, the major groups of flavored pharmaceuticals were vitamins, antibiotics, cough preparations, sulfas, and sulfa-antibiotics. These five major groups represented 65% of all the preparations. They were followed by six minor groups (19.5%) and by individual pharmaceuticals (15.5%) not classifiable with the established categories. The classification by *ingredients* was replaced

with one by use for the Cough Preparations because of their too diversified compositions.

Major flavor types by frequency of appearance (Table II) were cherry, followed by fruit, orange, raspberry, chocolate, and mint. They comprised 51.5% of all flavors. Noteworthy was the variety of flavor types, as evidenced by the fact that 200 pharmaceuticals had 52 different flavors, i.e., a different flavor in every 3.85 preparations.

A listing of all flavors for the 5 major pharmaceutical categories (Table III) indicated cherry as the prime choice for antibiotics, cough preparation, and sulfa-antibiotics; chocolate for sulfas; and orange for vitamins.

The total usage of each of the 6 major flavor types (Table IV) illustrated the versatility of mint and orange, either one being present in ten different categories, though more than half of the orange type occurred in one group only—vitamins.

The Potential Range of Application (Table II) was measured by the size of the pharmaceutical groups in which the flavor appeared. Consequently, a flavor appearing in vitamins, size 43 members (Table I), and in Antibiotics, size 40 members (Table I) might be usable in 83 out of 200 products, or in per cent its potential range of application would be 41.5.

For practical purposes an attempt was then made to find the group of flavors best able to meet the following requirements: low number of members, high frequency of appearance, and wide range of application. Such a flavor "nucleus" would be composed of cherry, chocolate, mint, orange, and raspberry. Appearing in 186 out of 200 preparations (Table I[a]), they had a combined potential range of application of 93, in which also were included candy, citrus, cordial, and fruit because by basic type these nonspecific designations might qualify for placement in such a group.

Cherry, chocolate, mint, orange, and raspberry are represented in various forms in the official compendia.[3,4] However, their unofficial versions often are preferred from the standpoints of stability, strength, solubility, ease of preparation, standardization, and low cost.[5,6]

Summary and Conclusions

1. Out of a select number of modern pharmaceutical preparations, each 3.85 contained a different flavor type.
2. The largest group of flavored pharmaceuticals were the vitamins, followed by antibiotics, cough preparations, sulfas, and sulfa-antibiotics.
3. The most frequently occurring flavor types in descending order of frequency were cherry, fruit, orange, raspberry, chocolate, and mint.
4. Cherry was the prime choice for antibiotics, cough preparations, and sulfa-antibiotics; chocolate for sulfas; and orange for vitamins.
5. Fruit flavors commanded the widest range of application followed by mint and cherry.
6. A group composed of cherry, chocolate, mint, orange, and raspberry represents a flavor armamentarium of compactness and utility. Hence its value to manufacturing pharmacists deserves recognition. ■

[3] *The United States Pharmacopeia*, 15th rev., Mack Publishing Co., Easton, Pa.(1955).
[4] *The National Formulary*, 10th ed., American Pharmaceutical Association, Washington, D.C.(1955).
[5] Hamann, E. H., *Drug Standards*, **20**, 137(1952).
[6] Becker, C. H., *Am. Profess. Pharmacist*, **20**, 436(1954).

Protect Your Family Against Poisoning

The Division of Medicine of the Food and Drug Administration suggests that the following information be kept on the inside of the medicine cabinet door, as well as the name of a physician or the nearest hospital with telephone numbers, to be used in case of emergency poisoning:

Keep all drugs, poisons, and other household chemicals out of the reach of children and away from food.

Lock up all dangerous substances.

Do not store poisonous or inflammable substances (kerosene, gasoline, rat poisons, etc.) in food or beverage containers.

Read all labels and carefully follow "caution" statements. Even if a chemical is not labeled "poison" incorrect use may be dangerous.

Do not eat or serve foods which smell or look abnormal and remember that they may poison household and farm animals.

Be sure all poisons are clearly marked. This can be done by sealing with adhesive tape or using a special marker.

When you throw away drugs or hazardous materials, be sure the contents cannot be reached by children or pets.

Warn small children not to eat or drink drugs, chemicals, plants, or berries they find, without your permission. Insist on this.

Use cleaning fluids with adequate ventilation only, and avoid breathing vapors.

Protect your skin and eyes when using insect poisons, weed killers, solvents, and cleaning agents. Be sure to *wash thoroughly after use* of such things, and promptly remove contaminated clothing. Do not allow food or food utensils to become contaminated when using insect sprays, aerosol mists, rat poisons, weed killers, or cleaning agents.

Do not take or give medicine in the dark. Be sure you can clearly read the label on the container.

When measuring drugs give it your full attention.

Give infants and young children drugs only as directed by your physician.

Before measuring liquid medicine always *shake the bottle thoroughly.*

Safeguard tablets which are candied, flavored, or colored, since children eat them like candy.

Do not take medicine from an unlabeled bottle—transparent tape over the label will protect it.

Date all drugs supplies when you buy them.

Weed out the left-overs regularly from your medicine chest—especially any prescription drug that your physician ordered for a particular illness.

Use a prescription drug only for the patient for whom the physician ordered it.

Read all directions and caution statements on the drug label each time you plan to use it.

The above warnings have been printed by the Food and Drug Administration on a card entitled *Protect Your Family against Poisoning.* This card, which provides space for emergency telephone numbers, is conveniently arranged in a form suitable for posting on the medicine cabinet door or the kitchen or bathroom wall.

DIVISION OF

HOSPITAL PHARMACY

by Paul F. Parker

The pharmacist is a member of the health team and as such is anxious to participate more actively, particularly in providing drug information to other members of the team as needed. But, besides meeting his responsibilities in the distribution of drugs, he is very much concerned about health programs that affect his business or position.

Not uncommonly, pharmacists are called upon by the physician to supply information on dosage forms, sizes available, toxicity, etc. As drug usage becomes constantly more complex, the types of information requested become increasingly more difficult to provide. These requests are usually on an informal basis and the extent to which requests are made by the physician depends upon his personal habits, the types of experience he may have had in obtaining the information he needed, and the general usefulness of such service.

Hospital pharmacists are perhaps called upon to render drug information service more frequently than pharmacists in other types of practice. This is only reasonable, since they are in contact with medical interns, residents, and others who are in training. The pharmacists' ability to be helpful at this stage of the physicians' career is probably more significant than at any other time, particularly if their service is worthwhile. But the more effectively the hospital pharmacist provides drug information for the physician, the greater will be the demand for similar services from pharmacists in other types of practice. Because the physician has received this type of collaboration as an intern, he expects it from other pharmacists when he enters private practice.

It is interesting that some hospital pharmacists have utilized a unique approach during recent years to participate more actively as a member of the health team. This idea has consisted of requesting permission to accompany the physicians on their rounds to visit patients daily while they are in the hospital. In some instances, the pharmacist observes the hospitalized patient through the entire course of his illness, thereby seeing both the use and the effect of drugs. The purpose of this activity would be to learn something about the problems involved in the clinical application of drug usage.

Not uncommonly, the physician is accompanied on his rounds to visit his patients by a retinue of health team workers, including consultants from other specialty services, residents, interns, nurses, or other hospital personnel whose jobs can be performed more effectively when they have first-hand knowledge of the problems in the clinical course of the patients' treatment. This has been a traditional method of teaching physicians and other health workers. Its value to pharmacists as one teaching method is just as great as to others in the health team.

By accompanying the physician when he attends the hospitalized patient, the pharmacist gains a better understanding of the problems that the physician faces in the selection of a suitable therapeutic agent. With the availability of such a wide range of medications, it is only reasonable that selection of those most suitable would depend upon a detailed knowledge of their physical, chemical and therapeutic variations. The observation of a patient's response to drugs further dramatizes the need for detailed information. Although it should not be presumed that the pharmacist would tell the physician what to use in any given set of clinical circumstances, a more intimate knowledge of the problems stimulates further search for and study of the proper type of drug information by the pharmacist that would be most helpful.

Obviously, time and circumstance do not make it possible for all hospital pharmacists to participate to this extent in the clinical drug usage program of the hospital. But it is being carried out in some institutions, and it illustrated the increasing extent to which pharmacists cooperate as a member of the health team. It is most significant that this type of activity predominates in the teaching institutions and that physicians in training will therefore come to expect close cooperation and understanding of the drug problems that they encounter in clinical practice.

There is a distinct need for pharmacists to provide drug information to physicians in their routine clinical practice. The increasing number of drugs that are made available and the increased complexity of their clinical application strongly indicates that the need will increase. In order to meet this need, it will be necessary for the pharmacist to do more than file a 3 x 5 information card on each drug that becomes available. He will need to study and understand its clinical application, at least to the extent that it will be only necessary to use the abbreviated information form to refresh his memory.

Hospital pharmacists are continuously urged to participate more actively as a member of the health team in the hospital. They are provided with an increasing amount of information through publications, continuing education programs, and by specialized hospital representatives who are employed by a number of pharmaceutical companies. As physicians recognize the value of the pharmacist in supplying drug information, and as new physicians who have had such service enter private clinical practice, it is only reasonable that they expect similar services from the community practitioner of pharmacy. We hope that he will be equipped, both educationally and in his routine practice, to meet these increased professional responsibilities.

NOTICE

Pictures of National Pharmacy Week exhibits to be submitted for competition must be in accordance with National Pharmacy Week contest rules. A copy of these rules was sent to you previous to National Pharmacy Week. For the time being, keep these following points in mind:

1—All retail pharmacy display photos must be submitted in duplicate to the respective State Associations not later than Nov. 15.
2—All others (public exhibits, colleges, and hospitals and clinics), must submit pictures in duplicate to the APhA not later than Dec. 15.
3—*All* photos submitted must be 8"x10" glossy prints.
4—Each display photograph must include the strip, "National Pharmacy Week, Oct 6–12."
5—Cash, trophies, and certificates will be awarded to winning entries.

Be sure your picture is eligible. Check the contest rules, watch the deadline, submit your photo promptly.

Good Luck!

SQUIBB ANNOUNCES a new, improved agent for better management of psychotic patients

schizophrenia • manic states • psychoses associated with organic brain disease

VESPRIN

Squibb Trifluprom azine 10-(3-dimethylaminopropyl)-2-(trifluoromethyl) phenothiazine hydrochloride

In extensive clinical experience—singularly free from toxicity

- Jaundice or liver damage—not observed
- Skin eruptions—rare
- Photosensitivity—rare
- Blood dyscrasias—not observed
- Hyperthermia—rare
- Convulsions—not observed

Dosage: Usual initial dose, 25 mg. t. i. d., to be adjusted according to patient response. See literature.

Tablets of 10, 25 and 50 mg.

'VESPRIN' IS A SQUIBB TRADEMARK

Chemically improved

Modification of the phenothiazine structure potentiates beneficial properties . . . reduces unwanted effects

Pharmacologically improved

Enhanced potency with far less sedative effect

Clinically improved

Does not oversedate the patient into sleepiness, apathy, lethargy

Drug induced agitation minimal

Active and rapid in controlling manic states, excitement and panic . . . in modifying the disturbing effects of delusions and hallucinations . . . in moderating hostile behavior . . . in facilitating insight

Intractable behavior patterns brought under control . . . patients made accessible to psychotherapy . . . nursing care reduced . . . social rehabilitation hastened

Effective dosage levels may be reached without development of side effects

SQUIBB *Squibb Quality—the Priceless Ingredient*

On The ECONOMIC SIDE

By Richard R. Dier

Trading Stamps

Following the investigation on operations and special methods of certain trading stamp companies, the Federal Trade Commission has announced that it does not consider trading stamp plans in themselves to be an unfair method of competition under the laws it administers. As a result, the Commission will not issue any complaints at this time prohibiting the use of trading stamps.

The FTC's investigation was launched after it received numerous complaints from businessmen and individuals attacking the use of trading stamps as an unfair method of competition or as unfair and deceptive acts or practices in commerce. Investigation also revealed that trading stamps have been used in merchandising for more than 60 years and that there are now about 300 companies operating trading stamp programs.

Although the FTC's decision is not to take any action on trading stamps now, it plans to continue the study of stamp plan operations and will take action where necessary to prevent deception of customers, price discrimination, illegal exclusive dealing, boycott, conspiracy, or any other violation of the Federal Trade Commission or Clayton Acts.

Many retail pharmacists will not be happy with the Government decision in this highly controversial area. Surveys have shown that stamp savers pay higher retail prices for the privilege of receiving trading stamps. The problem remains unsolved and will bear future watching.

Pharmacists—Supply and Demand

Moderate but steady increase in the employment of pharmacists in the future is expected due to population increases and rising standards of medical care, according to the *Occupational Outlook Handbook* of the U.S. Dept. of Labor, just published.

About 4,000 practicing pharmacists will be needed each year to fill positions in pharmacies left vacant due to retirement, death, and other reasons. With the trend toward shorter working hours, many pharmacies will hire additional pharmacists. Further expansion in pharmaceutical manufacturing and research will also create new opportunities for pharmacists. More pharmacists will be needed in sales and distribution positions, too.

There will be a great demand for pharmacists with graduate training in hospitals and the pharmaceutical manufacturing industry.

With women representing about 6% of the 111,000 registered pharmacists, it is expected that they will find their best opportunities in hospital pharmacy and laboratory work.

Wages

Beginning pharmacists in retail pharmacies earned between $80 and $110 weekly in 1956. However, these are average figures which were affected by the number of hours worked, size and geographical location of the pharmacy, and other factors. Those employed in hospitals and manufacturing firms averaged from $4,000 to $5,000 annually. The entrance salary in the Federal Government was $4,525.

Retail Advertising

Individuality in advertising will help build an effective personality for a small pharmacy and increase sales, according to the Small Business Administration. Individuality can be developed by advertising in newspapers, direct mail, magazines, telephone solicitations, and house-to-house handbills. Worthwhile retail advertising should help customers recognize and remember the appropriate personality of a particular store. *Individuality in Retail Advertising* can be obtained upon request from the Small Business Administration, Washington 25, D.C.

Drug Industry Sales at New High

Thirteen major pharmaceutical manufacturers showed increased sales for the first half of 1957, according to a study from the Research Department of Smith, Barney & Company, New York Stock Exchange members. During the first quarter of 1957, the average sales increase was 13.1% compared with the same 1956 period. In the second quarter, the average was 8.4%.

The study suggests that some manufacturers will benefit from sales of the Asian influenza vaccine. Many companies have enlarged their antibiotic facilities in anticipation of a possible broad scale secondary infection from a "flu" epidemic. The rate of new product introduction continues high.

Companies which had sales of $100,000,000 or more for the first six months of 1957 were American Home Products and Eli Lilly & Company. Rapidly advancing to this level are Merck & Company with $91,304,000 and Charles Pfizer & Company, Inc., with $98,460,000. (See Table I.)

Table I—Drug Industry Operating Results First Six Months 1957 and 1956

Company		Sales (000)	Increase, %
Abbott Laboratories	1957	$51,448	9.1%
	1956	47,158	
American Home Products	1957	185,423	15.9
	1956	159,980	
Eli Lilly & Co.	1957	100,570	11.7
	1956	90,043	
Mead Johnson	1957	25,777	19.6
	1956	21,550	
Merck & Co.	1957	91,304	4.9
	1956	87,066	
Norwich Pharmacal	1957	15,481	13.8
	1956	13,608	
Parke, Davis & Co.	1957	75,886	14.0
	1956	66,582	
Chas. Pfizer & Co., Inc.	1957	98,460	12.9
	1956	87,194	
Schering Corp.	1957	29,438	8.1
	1956	27,220	
G. D. Searle & Co.	1957	15,028	6.4
	1956	14,120	
Smith Kline & French Labs.	1957	55,678	5.3
	1956	52,885	
Vick Chemical Co.	1957	43,070	7.7
	1956	39,997	
Warner-Lambert	1957	69,928	10.7
	1956	63,194	

Consumer Advertising

A total of $416,835,000 was spent for consumer advertising in the drug, toilet, and sundries industries in 1956. This represents a 4.5% increase over 1955 and 22.6% over 1954.

Highly interesting is the fact that this total ranked second only to the food and grocery fields' similar expenditures of slightly more than $1,000,000,000 in 1956. Following is a breakdown of the media used by the drug, toilet, and sundries industries:

Magazines	$75,303,000
Newspapers	49,302,000
Newspaper Sections	20,617,000
Network Radio	24,460,000
Network Television	142,500,000
Spot Radio	21,606,000
Spot Television	76,506,000
Miscellaneous	5,000,000

Retail Trade

Sales of retail pharmacy and proprietary stores for 1957 should easily pass the $6,000,000,000 mark. According to the U.S. Department of Commerce, August, 1957 sales were $534,000,000 compared with $487,000,000 for August, 1956. July, 1957 sales were $524,000,000.

FEDERAL & STATE ACTIONS

FDA ACTIONS

Illegal Over-the-Counter Sales for the Months of August and September

Alma, Ga.—Selling amphetamine and/or barbiturates without physicians' prescriptions. Owners each fined $500 and both placed on probation for 4 years

Atlanta, Ga.—Selling penicillin and/or amphetamine without physicians' prescriptions. Owner placed on probation for 2 years; pharmacist previously placed on 2-year probation in March 1957.

Chicago, Ill.—Selling antibiotics, hormones, and Savatan without physicians' prescriptions. Firm fined $300 plus costs of $42.50; pharmacist fined $150; company officer fined $100.

Baltimore, Md.—Selling and refilling amphetamine, barbiturates, and/or penicillin prescriptions without physicians' authorizations. Owners fined $1,000 plus costs of $17.50; pharmacist fined $100 plus costs of $17.50; both placed on probation for 5 years.

Minneapolis, Minn.—Refilling barbiturates and/or amphetamine prescriptions without physicians' authorizations. Firm fined $500; pharmacist fined $1,000; partner fined $400.

St. Louis, Mo.—Refilling hormone, barbiturate, sulfonamide, and/or Serpasil prescriptions without physicians' authorizations. Manager and pharmacist each fined $600 plus $35 costs, 6-months jail sentence for each suspended and placed on probation for 1 year.

St. Louis, Mo. (service station)—Selling amphetamine without physicians' prescriptions. Manager sentenced to 1 year in jail.

Webster Groves, Mo.—Selling and refilling prescriptions for hormones, barbiturates, sulfonamides, and Meticorten without physicians' authorizations. Owner fined $300 plus costs of $35.

Orange, N.J.—Selling and refilling Butazolidin and penicillin prescriptions without physicians' authorizations. Owner fined $250 and placed on probation for 5 years.

Charlotte, N.C.—Selling penicillin and sulfonamides without physicians' prescriptions. Firm and pharmacist each fined $500.

Cincinnati, O.—Selling ergot preparations without physicians' prescriptions Owner fined $500, 1-year jail sentence suspended.

Ponca City, Okla.—Selling antibiotics without physicians' prescriptions. Owner fined $40; clerk fined $30.

Ponca City, Okla.—Selling antibiotics without physicians' prescriptions. Owners fined $20.

Providence, R.I.—Owner violated probation imposed June, 1957, with 7-month suspended jail sentence, for illegal prescription drug sales—by breaking local law unrelated to drugs; probation revoked and required to serve jail sentence previously suspended.

Dallas, Tex. (physician)—Selling amphetamine without valid prescriptions. Jury returned verdict of not guilty.

Milwaukee, Wis.—Selling antibiotics and amphetamine without physicians' prescriptions. Owners fined $400.

Injunctions

Alexander P. McArthur, t/a The Smylax Co. & The Ardine Co., Chicago, Ill.—Permanently enjoined from interstate shipment of proprietary drugs misbranded by false and misleading therapeutic statements in accompanying labeling that the drugs are adequate and effective treatments for many serious and chronic diseases and conditions. (Preliminary injunction issued June, 1957.)

Hoxsey Cancer Clinic, Inc., John J. Haluska, Pres. & Admin., Philip Stager, Treas., Samuel Einhorn, Sec., John H. Benko, V. Pres., Delmar Randall and Harold Galbraith, doctors of osteopathy, Portage, Pa.—Permanently enjoined from interstate shipment of drugs known as the Hoxsey treatment for internal cancer. Defendants will pay $13,000 court costs. (Oct. 2, 1957).

Substandard Drugs

Halitosine Co., t/a Allan & Co., Paul J. Horton, Pres., St. Louis, Mo.—Various drugs were deficient in or contained excesses of certain ingredients. Firm fined $150; charges against Horton dismissed.

Violation of Probation

Jake C. Bagwell, Charlotte, N.C.—Violated probation imposed April, 1956; probation revoked and required to serve 1-year suspended jail sentence for illegal prescription drug sales.

Help Fight TB

Buy Christmas Seals

FTC ACTIONS

Bishop Hair Experts—An FTC hearing examiner has issued an order requiring this firm, of Cincinnati, Ohio, to limit its claims to cases other than male pattern type baldness. He ruled that the firm, owned by Gilbert S. Bishop, has falsely advertised that his preparations can overcome baldness and that hair will be induced to grow in almost every case.

Morkon Pharmacal, Inc.—The FTC has alleged that this firm has made false claims for "Norkon Tablets" advertised as a "new kind of medicine for the awful pains of arthritis, rheumatism, and neuritis," whereas these tablets will do no more than give temporary relief from minor aches or pains of these ailments.

Sunway Vitamin Company—This firm of Chicago has claimed that its "Sunway Super Vitamin Tablets with Iron" are effective in supplying pep and more red blood and in relieving nervousness and restlessness. The FTC has challenged these claims.

Warsene Capsules—The Warson Products Corporation and John J. Powers, George R. Williams, and Donald E. Fahey, individually and as officers of the said corporation, have been ordered to cease and desist from advertising in newspapers and by radio and television broadcasts falsely that their Warsene Capsules were an effective treatment for the pains and discomforts of arthritis, rheumatism, etc.: contained several active ingredients; were made like a doctor's prescription; and were a new and different kind of treatment not heretofore available which would not cause a stomach upset. [*Fed. Reg.* **22,** 7233(Sept. 11, 1957)]

Wybrant—An FTC hearing examiner has issued an order prohibiting the firm, The Wybrant System, a partnership of William W. Adel and Wade M. Wybrants, from falsely advertising that it can prevent baldness and cause hair to grow in cases of male pattern baldness. Clients with frontal baldness who appeared as witnesses still had high foreheads.

MEMBERS

THE ASSOCIATION EXTENDS A CORDIAL WELCOME TO THE FOLLOWING MEN AND WOMEN WHO WERE ACCEPTED FOR ACTIVE MEMBERSHIP DURING THE MONTH PRECEDING PREPARATION OF THIS ISSUE

ARKANSAS
Provost, George P., Little Rock
Reisz, Maurice E., Little Rock
Rose, Ivan W., Rogers

CALIFORNIA
Boynoff, Morris, Berkeley
Comstock, Charles C., Los Angeles
Giddings, E. Tennyson, Los Angeles
Hahn, Donald R., San Francisco
Lazarus, Leo, Fresno
Lewin, Robert F., Santa Monica
MacNicol, Jane, Costa Mesa
McWilliams, John W., La Crescenta
Nelson, Frank R., Chico
Perkins, T. Donald, San Diego
Perveler, Martin, San Gabriel
Whelan, Edward A., Escondido
Wright, Robert T., Danville

COLORADO
Netz, Howard E., Denver
Odom, William C., Denver
Yarbro, D. B., Denver

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Annino, Louis C., Middletown
Mason, Frederick A., Thompsonville
Szczesiul, Anthony J., Derby

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Mayer, Harry F., Jr., Kenosha
Wendt, John R., Milwaukee

INTERNATIONAL
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French, Ian W., Arnprior, Ont., Canada
Macdonald, Austin W., Vancouver, B.C., Canada
Quashie, John K. A., Accra, Ghana, West Africa
Tobias-Neto, Jose, Salvador, Bahia, Brazil

Deceased

Eichold, Bernard H., Mobile, Ala., Aug. 11, 1957
Fox, Thomas H., Miami Beach, Fla.
Halperin, Jack H., Brooklyn, N.Y.
Hauck, Chester M., Los Angeles, Calif.
Heritage, Edwin H., Baltimore, Md.
Patch, Ralph R., Stoneham, Mass., Sept. 18, 1957

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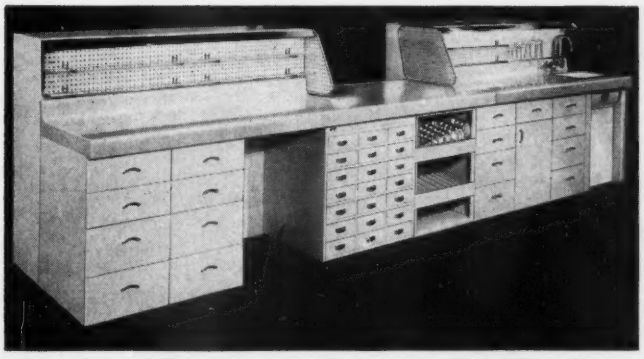

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Members of the AMERICAN PHARMACEUTICAL ASSOCIATION are invited to submit their professional problems to The Editor of the PRACTICAL PHARMACY EDITION, 2215 Constitution Ave., N. W., Washington 7, D. C. Inquiries should include all pertinent details.

Neomycin in Kaolin-Pectin Suspension

Can you tell us why addition of neomycin to Kaopectate or Pectocel causes the mixture to thicken and on standing to separate more completely than without the neomycin?—W. J. K., Idaho.

No definite answer can be given to the above question, particularly when the manner of addition of neomycin is not explained. A comprehensive report on compatibility and incompatibility of the basic antibiotic, neomycin sulfate, appeared in THIS JOURNAL, *18*, 421 (July 1957). A mixture of solutions of neomycin sulfate and pectin remained clear and the potency remained constant for at least a month. The report did not include data on a mixture of neomycin sulfate solution with kaolin, although the authors' laboratory has produced a marketable suspension of kaolin-pectin suspension with neomycin. The commercial product, however, also separates on standing and requires a "shake" label. Perhaps you are not aware of the effective combination marketed as Kaopectate with Neomycin (Upjohn).

H.E.B. Ointment Base

Can you give us any information on H.E.B. Ointment Base and what would be a suitable preservative?—C. J. W., California.

"The Extra Pharmacopoeia," Martindale, includes the following product: Halden's Emulsifying Base (Halden). Syn. "H.E.B." Simplex. Liquid paraffin 3, soft white paraffin 2, a mixture of higher fatty alcohols (hexadecyl and octadecyl alcohols) containing 10% acid esters (phosphated) of the alcohols 2. A suitable preservative for this preparation would be a mixture of methylparaben, 0.25 Gm., and propylparaben, 0.15 Gm. per 1,000 Gm. of ointment.

Embequin

Can you help us find a drug called Emboquin or Embequin?—M. S., Washington, D. C.

The antiprotozoan drug Embequin is marketed by the British firm, May & Baker. It is diiodohydroxyquinoline or diiodohydroxyquin USP which is available in the U. S. as Diodoquin (Searle).

Peppermint Emulsion

Can you help us with a request for emulsion of peppermint oil?—E. M. R., Oklahoma.

The following formula for Emulsion of Peppermint is included in the British Pharmacopoeia 1953:

Peppermint oil.....	100 ml.
Liquid extract of quillaia.....	2.5 ml.
Distilled water *q.s. ad.*.	1,000 ml.

Add the oil to the liquid extract, shake, and gradually add the water to make 1,000 ml., shaking well after each addition. The emulsion is equivalent, in content of peppermint oil, to peppermint spirit. The dose is 0.3 to 2 ml.

Megimide (Mikedimide), Daptazole (Amiphenazole)

Can you help us supply information to a physician who inquired about the drugs Megimide and Daptazole?—W. A. R., Ohio.

Megimide and Daptazole have been used clinically as barbiturate antagonists in the treatment of poisoning, as reported by Dr. J. M. Arena, *J. Am. Med. Assoc.*, **163,** 1341(1957). Megimide, 3,3-methylethylglutarimide, is available for clinical trial in this country as Mikedimide (methetharmide) from Panray Corporation. Daptazole, 2,4-diamino-5-phenylthiazole HCl, known also as Amiphenazole, is marketed by Nicholas Products Laboratories, Slough, Bucks, England. These drugs have had more extensive use in England than in America.

Phenobarbital, Potassium Citrate and Hyoscyamus

A physician wants us to make the following solution in large amounts. We plan to use phenobarb. elix. for half the volume, add sod. phenobarb. to required amount of phenobarb., hyoscyamus tinct., and water or syrup with cherry conc. for flavor and color. Please suggest a procedure.—R. L. S., Ohio.

It would be useful to prepare the "solution" in the prescribed 100-cc. volume before preparing a larger volume. Use of sodium phenobarbital would probably cause a slow precipitation of the acid form. Phenobarbital could be used and dissolved in the hyoscyamus tincture, but it might be preferable to dissolve the phenobarbital in sufficient alcohol to maintain a concentration of 14% in the final product and incorporate the hyoscyamus alkaloids as salts in order to avoid separation of water-insoluble constituents of the tincture. Add the alcohol solution of phenobarbital to the phenobarbital elixir, and mix. Make water solutions of the hyoscyamine salt (or a combination with hyoscine salt) and potassium citrate, add the solutions separately to the water or syrup in which the cherry concentrate has been mixed, and add the mixture to the elixir portion, with stirring.

Another procedure would use phenobarbital elixir to supply nearly the desired final volume. The potassium citrate would be dissolved completely in the elixir and the hyoscyamus tincture would be added slowly with stirring.

Hydrofluoric Acid Burns

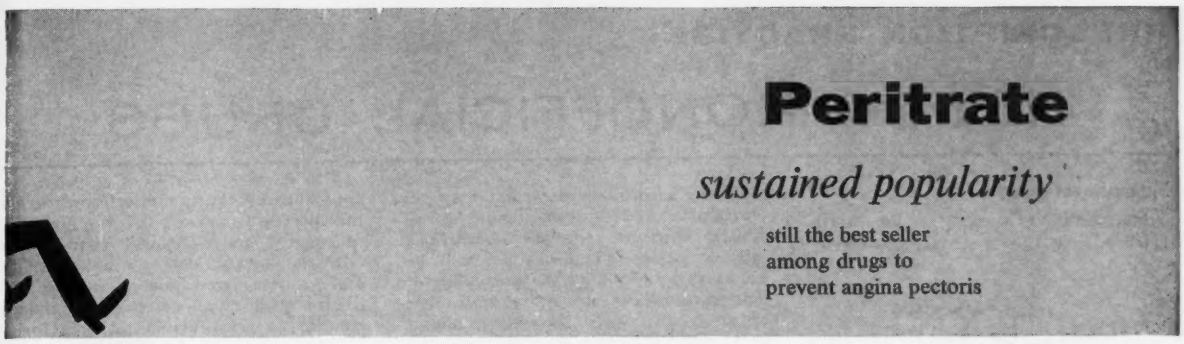
How are magnesium oxide and glycerin used in the treatment of burns caused by hydrofluoric acid?—J. J. J., Pennsylvania.

According to Dr. W. F. von Oettingen, in his book *Poisoning*, 1954 ed., p. 363, treatment of hydrofluoric acid burns "consists of immediate and abundant lavage with water for several hours" . . . . "and should be followed by a wet dressing consisting of a paste of 20% magnesium oxide in glycerin, or a mixture of magnesium oxide and magnesium sulfate." Further treatment is described. A formula that appeared elsewhere contains: magnesium sulfate heptahydrate 20%, magnesium oxide 6%, glycerin 18%, procaine HCl, 1.2%, in water-soluble base to make 100%.

Per-Abrodil—Source

Can you help us with a request from a dentist for a 35% Per-Abrodil Bayers.—D. N., Wisconsin.

Per-Abrodil (Bayer) is apparently the same as Iodopyrocet Injection U.S.P. The 35% solution is distributed in the U.S. by Winthrop Laboratories under the trademarked name Diodrast. It is recommended by the manufacturer as an X-ray contrast medium for use in urography. We know of no use for it in dentistry.



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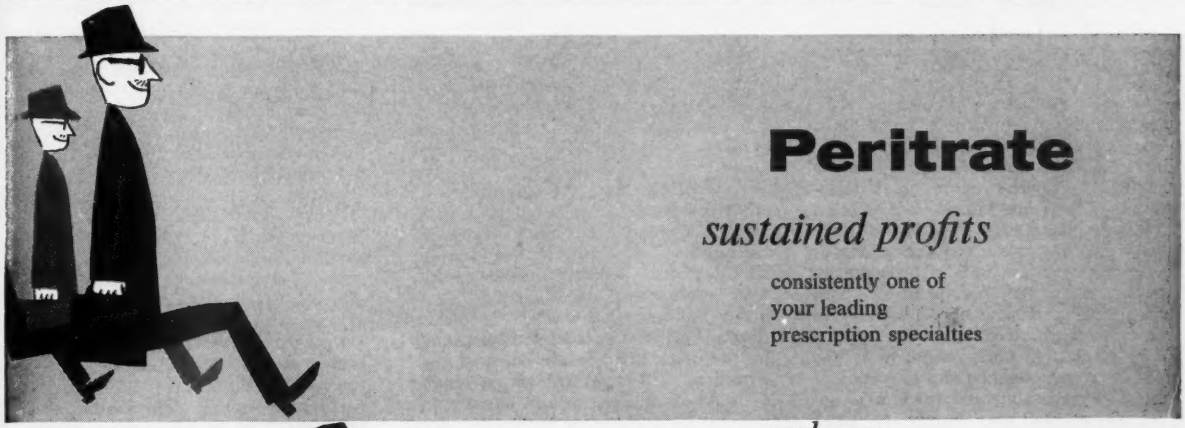

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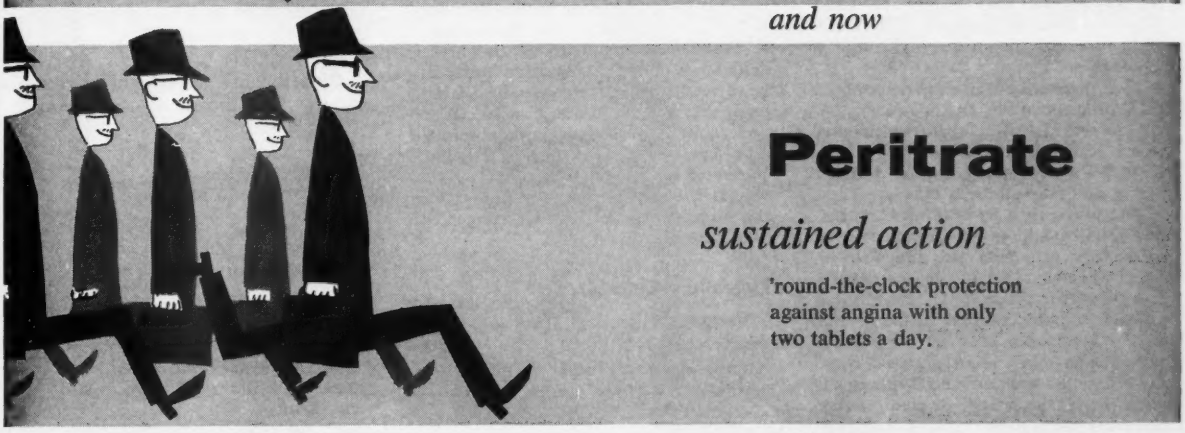

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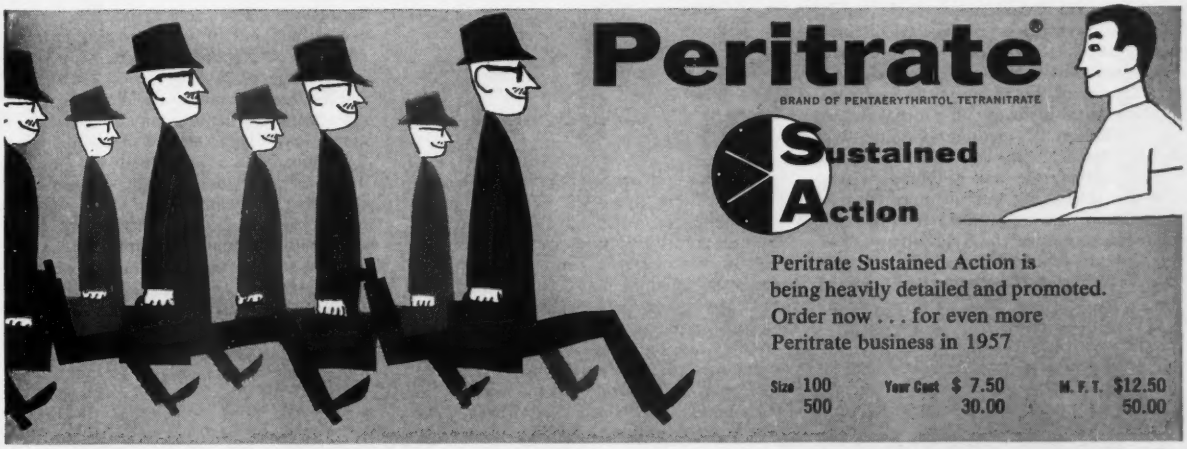

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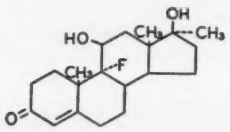
Fluoxymesterone

Halotestin (Upjohn); 9α-fluoro-11β-hydroxy-17α-methyltestosterone.



Actions and uses: Fluoxymesterone, an orally effective synthetic halogenated derivative of 17α-methyltestosterone, produces all of the metabolic and clinical effects of methyltestosterone and testosterone propionate but is more potent than either of these. In animal studies, the drug is approximately 10 times as potent as equal amounts of methyltestosterone, from the standpoint of both androgenic and anabolic effects. In clinical practice, fluoxymesterone appears to be about five times as potent as the nonhalogenated compound. Excretion of nitrogen, potassium, and calcium is appreciably reduced after therapeutic doses. Since retention of sodium is minimal, edema ordinarily is not a complication of clinical use.

Fluoxymesterone is an effective anabolic and androgenic agent. Although it is difficult to evaluate its comparative potency in each of these areas, available evidence points to approximately equal protein-sparing and masculinizing effects. Thus, weight gain with a positive nitrogen balance usually follows its administration. Satisfactory responses also may be expected when the drug is used for replacement therapy in primary hypogonadism or testicular hypofunction or, in the female, for the treatment of menorrhagia and metrorrhagia. In a relatively small number of patients with advanced metastatic carcinoma of the breast, fluoxymesterone has produced subjective and objective improvements. Decreases in blood and urinary levels of calcium, recalcification of osseous metastases, regression of soft-tissue lesions, and relief of pain have been reported. However, the ultimate evaluation of fluoxymesterone in comparison with testosterone propionate for the palliation of mammary cancer will require further study.

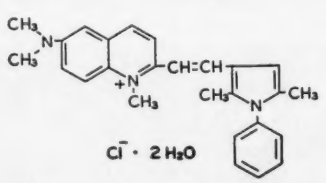
Side-effects referable to fluoxymesterone are similar to, but no more troublesome than, those produced by the other androgens, natural or synthetic. Thus, in the male, excessive dosage or prolonged administration may cause inhibition of testicular function, with resultant oligospermia. In the female, large doses may produce virilization as evidenced by hirsutism, deepening of the voice, enlargement of the clitoris, regression of the breasts, and acne; occasionally, nausea and gastrointestinal upsets occur. The obstructive jaundice and hepatic damage sometimes observed after administration of methyltestosterone have not been reported after use of fluoxymesterone. More clinical experience, especially observations after long-term administration, will be necessary to eliminate the possibility of deleterious effects on the liver and other organs by this drug. As with all androgens, fluoxymesterone is contraindicated in patients with prostatic carcinoma.

Dosage: Fluoxymesterone is administered orally. Dosage varies with the condition being treated, its severity, prior androgenic therapy, and individual response. The total daily dose may be administered at one time or in three or four divided doses.

For anabolic effects, the average dose for adults ranges between 4 and 10 mg. per day. For complete replacement therapy in eunuchs, doses up to 10 mg. per day may be given. In lesser degrees of testicular hypofunction, daily doses of 2.5 to 5 mg. are usually sufficient. In menorrhagia, 5 to 10 mg. is administered daily for one week prior to the onset of menstruation. In metrorrhagia, a similar daily dose is employed until bleeding has been controlled; dosage is then decreased to 2.5 to 5 mg. daily. For the palliation of inoperable carcinoma of the breast, daily doses of 6 to 20 mg. have been used; however, clinical experience indicates that, for appreciable results, at least 10 mg. and preferably 20 mg. must be administered each day. Treatment must generally be continued for three months or more before objective responses become evident. At this dosage range, definite virilizing effects usually result.

Pyrvinium Chloride

Vanquin (Parke Davis); 6-dimethylamino-2-[2-(2,5-dimethyl-1-phenyl-3-pyrryl)vinyl]-1-methylquinolinium chloride dihydrate.



Actions and uses: Pyrvinium chloride is a cyanine dye used clinically as an anthelmintic. Although it is sparingly soluble and poorly absorbed from the gastrointestinal tract, only about 60% of an orally administered dose appears in the feces; the amounts detectable in urine, blood, or bile are insignificant. Further studies are therefore indicated to determine the fate and distribution of the drug.

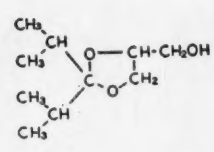
Pyrvinium chloride is proposed for the treatment of pinworms (oxyuriasis). On the basis of limited clinical experience, the drug appears to eliminate the worm, *Enterobius vermicularis*, and its ova with approximately the same effectiveness as do the salts of piperazine. It is not, however, sufficiently active against roundworms (*Ascaris lumbricoides*) to be clinically useful for this infestation.

After the usual doses of pyrvinium chloride, no serious manifestations of toxicity have been reported. Side-effects are ordinarily limited to gastrointestinal irritation with nausea and/or vomiting. If emesis occurs shortly after its ingestion, the drug may impart a red color to the vomitus. Likewise, the stools are frequently stained reddish-brown. In laboratory studies, bone marrow depression and liver and kidney damage have been observed in one species after administration of large doses for prolonged periods. Thus, a course of treatment in human patients should not exceed the prescribed period of five to eight days, and the drug should be administered cautiously to patients with renal or hepatic damage.

Dosage: Pyrvinium chloride is administered orally. The usual dose for the treatment of pinworms is 1.5 to 2 mg. per Kg. of body weight. This is administered in divided daily doses for five to eight days.

Promoxolane

Dimethylane (National); 2,2-diisopropyl-1,3-dioxolane-4-methanol.



Actions and uses: Promoxolane produces some skeletal muscle relaxation via an ascending noncurariform action on the spinal cord and a mild depression of the central nervous system. Pharmacologically, the relaxant effects are apparent at lower dosage than is the central nervous depression. The action on the spinal cord is believed to be due to a depressing effect on the spinal neurons. Promoxolane, therefore, cannot be classified as a tranquilizing agent in the same sense as chlorpromazine or reserpine; its mode of action is similar to that of meprobamate.

Promoxolane is proposed for clinical use as a calming agent in the symptomatic treatment of a wide variety of organic and functional disorders in which anxiety tension is the common denominator. Conclusions of its usefulness for this purpose are based upon case reports of clinical observers who noted beneficial effects after oral administration to a number of patients suffering from postalcoholic psychomotor agitation, menopausal symptoms, dysmenorrhea, "occupational stress," poliomyelitis, and arthritis. Favorable effects have been reported clinically; however, evidence from adequately controlled studies is lacking to prove con-

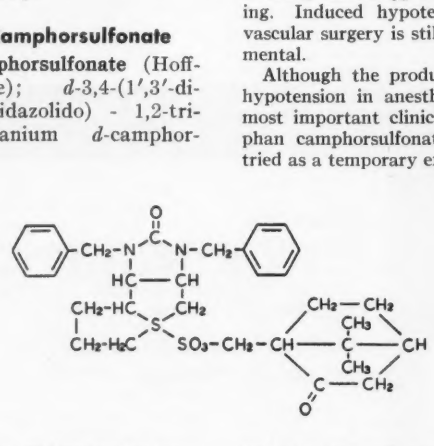
FAST ROLLING STOCK CREATES RAPID TURNOVER

clusively that the tension-relieving effects observed were caused by the action of the drug. Clinical usefulness of promoxolane as a calming agent has not been established by the double-blind technique. From the available reports promoxolane would appear to be without appreciable toxicity. Side-effects are apparently limited to occasional gastrointestinal upsets and drowsiness.

Dosage: Promoxolane is administered orally. For the relief of anxiety tension, the proposed dosage for adults is 0.5 to 1 Gm. four times daily.

Trimethaphan Camphorsulfonate

Arfonad Camphorsulfonate (Hoffmann-La Roche); *d*-3,4-(1′,3′-dibenzyl-2′-ketoimidazolido) - 1,2-trimethylenethiophanium *d*-camphorsulfonate.



Actions and uses: Trimethaphan camphorsulfonate, a ganglionic blocking agent with direct vasodilator actions, lowers diastolic and systolic blood pressure in both normotensive and hypertensive subjects. After intravenous administration, a hypotensive response occurs almost immediately, and this persists for 10 to 20 minutes after discontinuation of therapy. Under ordinary conditions of use, trimethaphan camphorsulfonate will not depress blood pressure beyond a certain minimal (floor) level. Once this level has been reached, further administration of the drug produces no additional reduction of blood pressure but, instead, prolongs the recovery period to normotensive levels. There is also evidence that tachyphylaxis can occur, but this is not common.

Owing to its evanescent duration of action, trimethaphan camphorsulfonate is not suitable for the routine medical management of hypertensive patients. However, this property makes the drug valuable in certain other situations in which the rapid production of hypotension, subject to minute-to-minute control, is clearly required. Since the hypotensive effect of the drug is mediated, in part, by direct vasodilation, some degree of hemostasis from capillary beds or small venules and arterioles follows its administration. Thus, the drug finds its principal use in certain neurosurgical procedures in which excessive bleeding obliterates the operative field to such an extent as to make the operation excessively hazardous or even impossible. Such procedures include craniotomies for arteriovenous anomalies, intracranial aneurysms, and vascular tumors. Judicious induction of controlled hypotensive anesthesia in such situations allows for a relatively bloodless field and, hence, better visualization and exposure, with more rapid completion of surgery. Because of its rapid action and the usual prompt return of blood pressure to normotensive levels after withdrawal, trimethaphan camphorsulfonate is clearly better suited than hexamethonium or other ganglionic blocking agents for this purpose. It should be emphasized, however, that while a reduction in blood loss is important, this per se is not the primary purpose for hypotensive anesthesia. Rather, this technique is intended as a means of making possible certain neurosurgical procedures that would otherwise be impossible or seriously handicapped by excessive bleeding. Induced hypotension in pelvic or vascular surgery is still considered experimental.

Although the production of controlled hypotension in anesthesia comprises the most important clinical use of trimethaphan camphorsulfonate, it may also be tried as a temporary expedient in the control of crises and encephalopathies associated with systemic hypertension, in pulmonary edema due to hypertension, and possibly in acute hypertensive toxemia of pregnancy. In these instances, however, the drug offers no advantages over any other potent hypotensive agent. There are reports of its successful employment as a hemostatic agent for acute epistaxis in hypertensive patients and for the control of subdural and subarachnoid hemorrhage in patients with severe head injuries.

The hypotensive response to trimethaphan camphorsulfonate is subject to wide variations; some patients (especially those in the supine position) exhibit minimal responses with even high doses. Hence, careful attention to dosage with frequent determinations of blood pressure is imperative. In addition, patients under induced hypotension generally require less anesthetic than when their blood pressure is at normotensive levels. Pupillary dilation can occasionally occur, thus masking the usual eye signs of the various stages and planes of anesthesia. It is therefore axiomatic that the drug be administered only by anesthesiologists experienced in its use. In skilled hands, hypotensive anesthesia can be achieved safely with a minimum of serious reactions and side-effects. Tachycardia, not necessarily associated with increased myocardial irritability, is a potential complication. Respiratory depression must also be guarded against, particularly if a skeletal muscle relaxant is being administered concomitantly. The drug is potentiated by procainamide and should be administered cautiously with this or other myocardial depressants. It is pharmaceutically incompatible with thiopental, thiamylal, gallamine, strongly alkaline solutions, iodides, or bromides but may be administered concurrently with these agents, using another vein. Side-effects or undue hypotension resulting from overdosage or idiosyncrasies may be antagonized by suitable vasopressors such as methoxamine, phenylephrine, or ephedrine. Epinephrine is considered too hazardous for this purpose because its sudden onset of action is difficult to control and because it may increase cardiac irritability. Since the mere prolongation of hypotension in the systolic ranges of 80 to 100 mm. Hg is generally not harmful, it is probably unnecessary and unwise to administer vasopressor agents routinely for the sole purpose of hastening the return of blood pressure to normotensive levels. The contraindications to trimethaphan camphorsulfonate are the same as those for other ganglionic blocking agents, including shock (regardless of cause), severe atherosclerosis, polycythemia, renal or hepatic damage, and any condition in which there is inadequate blood volume or circulation to a vital organ.

Dosage: For hypotensive anesthesia, trimethaphan camphorsulfonate is administered by continuous intravenous infusion as a 0.1% solution (1 mg. per cc.) in either 5% dextrose in water for injection or isotonic sodium chloride solution. The rate of infusion is determined by the susceptibility of the individual patient to the drug and by the requirements of the surgeon. In the average patient this will vary from 1 to 4 mg. per minute, but it should be adjusted to provide the highest pressure compatible with the most satisfactory conditions for surgery. Infusion should not be started at the beginning of surgery but only at that point in the operation when visualization and exposure are complicated by excess bleeding. When this phase of the procedure is completed, administration of the drug should be discontinued gradually. At no time should the systolic pressure be allowed to fall below 60 mm. Hg or, in hypertensive patients, below two-thirds of the usual level. The patient should be carefully watched for indications of peripheral vascular collapse.

Fumagillin

Fumidil (Abbott); an antibiotic elaborated by strains of *Aspergillus fumigatus*. The chemical structure of fumagillin has not been determined.

Actions and uses: Fumagillin, an antibiotic used clinically as an amebicide, is highly active *in vitro* and *in vivo* against *Entamoeba histolytica* and some nonpathogenic strains of ameba. The drug has no effect on fungi or bacteria; hence, oral therapy is not complicated by overgrowth of monilia or other alterations in the flora of the gastrointestinal tract. In contrast to certain other antibiotics used in amebiasis, fumagillin exerts a direct lethal effect on *E. histolytica* rather than suppresses bacteria essential to its proliferation. The excretion and metabolic fate of fumagillin are imperfectly known. However, the fact that systemic side-effects do occur indicates at least partial absorption of this antibiotic.

Fumagillin may be used for the treatment of intestinal amebiasis; it has no effect in the extraintestinal form of the dis-

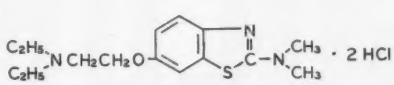
ease. On the basis of current evidence, it is considered about as effective as oxytetracycline or older drugs such as the iodinated compounds and the arsenicals. The cure rates reported after a course of therapy with fumagillin vary from 55 to 95%. It is believed that the latter figure could be approached more frequently if adequate precautions against reinfections were observed. Therapy cannot be considered successful unless at least two successive stool examinations are negative for motile ameba (trophozoites) and/or cysts. When extraintestinal amebiasis is present or suspected, fumagillin should not be used. Therapy in such cases should be restricted to agents known to suppress this form of the disease.

Side-effects are frequently encountered during therapy with fumagillin, especially at high dosage levels. Although they are sometimes sufficiently troublesome to require discontinuation of therapy, they are seldom serious and are usually reversible. Among these side-effects are abdominal cramping and an epigastric burning sensation, diarrhea, anorexia, nausea and vomiting, headache, vertigo, and a vesicular type of skin eruption, which may be followed by mild desquamation. Fumagillin has also been implicated as a possible causative agent in a few cases of neutropenia. Until the possible adverse effects of this antibiotic on the hematopoietic system can be more thoroughly elucidated, peripheral blood cell counts are a wise precaution during prolonged therapy.

Dosage: Fumagillin is administered orally in doses of 40 mg. a day in four divided doses over a period of 10 to 14 days. In more resistant cases, maximum daily doses up to 60 mg. may be tried, but this dosage level may be associated with increased toxicity. For children and severely debilitated patients, dosage should be calculated on the basis of age and weight.

Diamthazole Dihydrochloride

Asterol di-HCl (Roche); 6-(2-diethylaminoethoxy)-2-dimethylaminobenzothiazole di-HCl.



Actions and Uses: Diamthazole di-HCl, an antifungal agent, is active *in vivo* against dermatophytes of the genera Trichophyton and Microsporum and against the monilial organism, *Candida albicans*. Its activity against bacteria and the common nonpathogenic molds is negligible. Although the precise mechanism of its antifungal action is imperfectly known, diamthazole has shown fungistatic properties *in vitro;* it also exerts a mild keratolytic effect and possesses antisporulating properties. The drug exhibits good diffusibility on the skin and, when applied in moderate amounts to noninflamed dermal areas, is not absorbed to an appreciable extent into the systemic circulation.

Diamthazole di-HCl is used clinically for the treatment of superficial fungal infections caused by trichophytons, microsporums, and *C. albicans*. Repeated daily use has produced satisfactory results in chronic cases of tinea pedis (athlete's foot). Tinea capitis (ringworm of the scalp) caused by *M. audouini* or *M. lanosum* also responds to its use. The latter type of infection, however, often produces an inflammation or kerion and may react adversely to the drug if it is administered during this pyodermic phase. Cure rates for tinea capitis after use of diamthazole di-HCl range from 50 to 70%. Thus, the drug is not as effective as x-ray epilation, which can be expected to effect a cure rate of almost 100% when carried out by skilled personnel. The drug may be used in place of x-ray therapy in situations in which adequate facilities and personnel are not available or when total epilation is considered objectionable. Diamthazole may also be used for the treatment of tinea cruris, tinea corporis, and tinea versicolor. Dermatomycoses such as paronychia and onychomycosis caused by *C. albicans* have likewise been successfully treated with this agent. Since the drug is ineffective against bacteria, it may be necessary to administer suitable antibiotic agents along with diamthazole in order to combat concomitant or superimposed pyogenic infections of the skin.

In infants and very young children, ataxia, tremors, convulsions, hallucinations, and behavior changes have been reported after use of this drug, but there is more than a suggestion that these effects are due to sucking of fingers or of impregnated skull caps rather than to percutaneous absorption. Until more information can be accumulated, diamthazole di-HCl is nevertheless contraindicated in children under 2 years of age and should be used in reduced amounts in patients between the ages of 2 and 10. Also because of its possible neurotoxicity, the drug should not be used over extensive areas of the skin for the treatment of superficial fungus infections or tinea versicolor. Therapy should not be initiated during the acute or pyodermic phase of any fungus infection, and the drug should be applied on mucous membranes with caution. In adults, the only reported signs of toxicity are occasional local irritation and sensitization. In the event of these dermal manifestations or any systemic reaction, the use of the drug should be discontinued immediately.

Dosage: Diamthazole di-HCl is administered topically to infected areas of skin. The drug is usually employed in 5% concentration in a suitable dermatological vehicle.

For tinea pedis, the acute or pyodermic phase of the infection should be pretreated with a 1:30 solution of aluminum acetate or a 1:10,000 potassium permanganate solution. Once the acute phase has subsided, the infected skin is treated once or twice daily with a 5% tincture of diamthazole di-HCl; a 5% ointment is applied at night. A 5% dusting powder may be sprinkled into shoes and stockings daily during treatment and afterwards to prevent recurrence.

For tinea capitis, hair should be clipped from the infected areas and the scalp washed frequently with a bland soap; the drug is then applied as a 5% tincture during the day, and a 5% ointment is rubbed into the infected areas before retiring. This daily regimen should be continued for at least three weeks after the first negative Wood's light examination. The drug should never be administered during the kerion phase of the infection.

For tinea versicolor, a 5% ointment is applied daily to the infected areas after a soap and water scrub. Although the infection is often more widespread than is clinically evident, the potential toxicity of the drug precludes its application to the entire body. A 5% dusting powder may be used to prevent recurrence or reinfection.

A 5% ointment or tincture of diamthazole di-HCl is applied twice a day to the involved areas for the treatment of tinea cruris, tinea corporis, paronychia, or onychomycosis.

SUPPLEMENTAL STATEMENTS

Phytonadione, Oral Use

The Council has evaluated the oral use of phytonadione (Mephyton) for the treatment of hypopthrombinemia indruoced by anticoagulant therapy and other conditions characterized by overprolonged prothrombim times. It concluded that phytonadione is effective by the oral route and that this route is preferable to i.v. administration, except in emergency situations, in which bleeding is imminent or has actually occurred or in patients in whom oral therapy is impractical or contraindicated. Thus, the drug may be used to combat hypoprothrombinemia, whether caused by anticoagulant therapy, inadequate absorption or endogenous production of vitamin K, neonatal deficiency of prothrombin, or the toxic action of agents such as salicylates and phenylbutazone.

For the nonemergency treatment of hypoprothrombinemia induced by anticoagulant therapy, initial doses of 5 to 10 mg. should be administered orally. If a subsequent determination of prothrombin time indicates the need for more vigorous therapy but does not indicate the necessity for intravenous medication, additional doses of 15 to 25 mg. or more may be administered orally. Immediate intravenous infusion of 10 to 50 mg. of phytonadione in an emulsion is indicated for the emergency treatment of undue hypoprothrombinemia induced by anticoagulant therapy. For the treatment of hypoprothrombinemic conditions of other etiology, the drug is administered either intravenously or orally, depending on the severity of the situation. Dosage by either route is the same and usually ranges from 2 to 20 mg.; on occasion, as much as 25 to 50 mg. may be necessary. If prothrombin deficiency is caused by obstruction of bile or loss of it through biliary fistula, bile salts should be given with orally administered phytonadione.

PRESCRIPTIONS ARE MOUNTING FOR

PARACORT* PREDNISONE

PARKE-DAVIS

PARACORTOL* PREDNISOLONE

PARKE-DAVIS

Increasingly, physicians are prescribing PARACORT and PARACORTOL for patients with arthritic, rheumatic, and related disorders. Be prepared to service this market by keeping PARACORT and PARACORTOL in stock.

SUPPLIED: PARACORT and PARACORTOL are available as 5-mg. and 2.5-mg. scored tablets; bottles of 30 and 100.

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DETROIT 32, MICHIGAN

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PRESCRIPTION PRACTICE

NEW PRESCRIPTION PRODUCTS

All actively promoted items on which information has been received in the past thirty days are reported here. Manufacturers are urged to send details of their new products as early as possible, so that pharmacists through these pages will have full information before products are detailed to the physician. For inclusion in this department, for which there is no charge, send descriptive literature to the Editor, New Prescription Products Department, JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, 2215 Constitution Avenue, N.W., Washington 7, D. C.

Achrostatin V for Oral Suspension

Description: A cherry-mint flavored powder which, when shaken with 20 cc. of water and then diluted with an additional 28 cc. of water to make 60 cc., yields a suspension containing in each 5 cc.: tetracycline equivalent to tetracycline HCl, 125 mg.; sodium metaphosphate, 190 mg.; nystatin, 125,000 units; and 0.1% sodium benzoate.

Indications: For broad spectrum antibiotic therapy with protection against overgrowth of monilia.

Administration: Daily dosage based on tetracycline is 12.5 to 20 mg. per Kg. of body weight. In acute, severe infections in infants and children, 25 mg. per Kg. of body weight daily.

Form Supplied: 2-fl.oz bottle. The powder is stable for 1 year. In suspension, potency is retained for 2 weeks at room temperature.

Source: Lederle Laboratories, Pearl River, N.Y.

Norlutin Tablets 5 mg.

Description: Each grooved tablet contains 5 mg. Norlutin (norethindrone) which is the 17-alpha-ethinyl derivative of 19-nortestosterone.

Indications: Orally potent progestational action in the treatment of dysmenorrhea, amenorrhea, habitual and threatened abortion, premenstrual tension, menstrual irregularity, functional uterine bleeding and infertility.

Administration: 5 to 10 mg. twice daily or as directed.

Form Supplied: Bottles of 30 tablets.

Source: Parke, Davis & Co., Detroit 32, Mich.

Robaxin Tablets

Description: Each scored tablet contains 0.5 Gm. methocarbamol, 3-(*o*-methoxyphenoxy) - 2 - hydroxypropyl-1-carbamate.

Indications: A skeletal muscle relaxant for use in cases of acute back pain associated with muscle sprain; secondary to trauma; incident to nerve irritation. Also for relief of muscle spasm secondary to discogenic disease and postoperative orthopedic procedures; in bursitis and torticollis.

Administration: Minimal initial daily dose, 4 Gm., may be increased to maximal daily dose of 9 Gm. if necessary—2 tablets 4 times daily up to 3 tablets every 4 hours. When therapy is prolonged routine white blood cell counts should be made.

Form Supplied: Bottles of 50 and 500.

Source: A. H. Robins Co., Inc., Richmond 20, Va. (See p. 646.)

Sodium Versenate Solution 20%

Description: Each 5-cc. ampul contains 1 Gm. of sodium Versenate (Na_2EDTA) in 20% solution for dilution and i.v. infusion.

Indications: Restricted to emergencies, to reduce calcium levels in hypercalcemia preparatory to surgical procedures, and occurring in such conditions as bony metastatic malignancy, hyperparathyroidism and idiopathic hypercalcemia.

Administration: 5 Gm. per day is administered i.v. by slow infusion in 500 cc. of 5% glucose or normal saline, with the drip regulated to require from 2 to 3 hours for a total infusion. A total of 12 to 20 such infusions may be given in a series and then omitted for 2 to 3 weeks before a new series is started. Children, 60 mg./Kg. (1 Gm./35 lbs.) of body weight has been used to reduce serum calcium levels.

Form Supplied: 5-cc. ampuls in boxes of 6.

Source: Riker Laboratories, Inc., Los Angeles, Calif.

V-Cillin K Tablets

Description: Each scored white tablet contains 125 mg. or 250 mg. of penicillin V potassium, a soluble salt which is stable in the digestive tract.

Indications: For rapid attainment of high blood levels of penicillin.

Administration: Orally, as prescribed. The tablets are designed to disintegrate in stomach acids within about 5 minutes, giving a rapid response and maximum blood levels double those obtained with penicillin V, which is not completely dissolved in the digestive tract.

Form Supplied: 125-mg. (200,000-units) tablets in bottles of 50; 250-mg. (400,000-units) tablets in bottles of 24.

Source: Eli Lilly and Co., Indianapolis 6, Ind.

Other New Products

(Including chemicals, clinical trial drugs, diagnostic aids, and equipment for the retail and hospital pharmacy.)

Achromycin V Pediatric Drops Aqueous

An orange-flavored liquid containing, in each cc. (20 drops), 100 mg. Achromycin V (tetracycline buffered with sodium metaphosphate) is marketed by *Lederle Laboratories* for pediatric use where tetracycline therapy is indicated. Dosage, orally, 6 to 7 mg./lb. of body weight daily, as drops or with small amounts of milk, water, or fruit juice; in severe infection, 12 mg./lb. daily. Supplied in 10-cc. plastic dropper bottles.

Diamox Syrup

A peach-flavored syrup containing, in each 5 cc., 250 mg. Diamox (acetazolamide) is marketed by *Lederle Laboratories* for use as a diuretic in the treatment of edema due to congestive heart failure, preeclampsia glaucoma and excessive weight gain due to water retention. Dosage, orally 1 to 1.5 teaspoonfuls (5–7.5 cc.) daily depending upon weight. Supplied in 4-oz bottles. Parenteral and oral tablet forms also are available.

Dovhist Capsules

Capsules containing, in each: Dover's powder, 1/4 gr. (opium 1/40 gr.); pyrilamine maleate, 15 mg.; aspirin, 5 gr.; caffeine citrate, 1/4 gr., are marketed by *Haug Drug Co.* for symptomatic treatment of colds. Dosage, 2 capsules, then 1 every 4 hours. Supplied in bottles of 100 and 1,000.

Florinef-S Lotion (Vet.)

A veterinary lotion containing Florinef (fludrocortisone) with Spectrocin (neomycin + gramicidin) is marketed by *E. R. Squibb & Sons* as an anti-inflammatory, antipruritic, and antibacterial agent for treatment of dermatologic disorders of small animals. Supplied in 15-cc. plastic squeeze bottle.

Gevral T Capsules

Red capsules containing high potencies of 12 vitamins with 12 minerals and also, in each capsule, choline bitartrate 25 mg., inositol 25 mg., L-lysine HCl 25

mg., rutin 25 mg., and purified intrinsic factor concentrate (noninhibitory) 0.5 mg., are marketed by *Lederle Laboratories* for use in the treatment of vitamin and mineral deficiencies. Dosage, 1 capsule daily. Supplied in bottles of 100. See p. 624.

Heparin in Saline (Abbo-Vac)

Siliconed 500-cc. Abbo-Vac blood recipient bottles, each containing 30 cc. saline and either 15 mg. or 18 mg. (1500 or 1800 USP units) heparin sodium, are marketed by *Abbott Laboratories* for the anticoagulant protection, during 24 hours, of blood to be used during extracorporeal circulation in cardiac surgery. Following surgery, heparin in the recipient is neutralized with protamine.

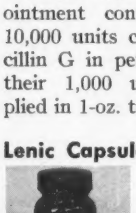
Ionosol D Modified Solution

A parenteral solution containing, in each 1,000 cc.: sodium, 80 mEq. (NaCl 1.169 Gm.); potassium, 36 mEq. (KCl 2,683 Gm.); calcium, 5 mEq. ($CaCl_2$ 255 mg.); magnesium, 3 mEq. ($MgCl_2$ 133 mg.); chloride, 64 mEq.; lactate, 60 mEq. (sod. lactate 6.724 Gm.); invert sugar, 100 Gm., in water for injection, is marketed by *Abbott Laboratories* for replacement of small intestinal, urinary, and insensible losses, in the absence of other abnormal losses. Dosage, intravenously at a rate not to exceed 500 cc. per hour. Supplied in 1,000-cc. bottles (6 in a package).

Ledercillin Ointment 10,000 Units

Lederle Laboratories have marketed an ointment containing, in each Gm., 10,000 units crystalline procaine penicillin G in petrolatum, in addition to their 1,000 u./Gm. ointment. Supplied in 1-oz. tubes.

Lenic Capsules



Capsules containing, in each: linoleic acid, 495 mg.; linolenic acid 20 mg.; oleic acid, 175 mg.; and 100 mg. of a mixture of tetraenoic, pentaenoic and hexaenoic acids, are marketed by *Crookes-Barnes Labs., Inc.*, as a source of unsaturated fatty acids for use in the reduction and management of elevated blood cholesterol levels. Dosage, 1 capsule 4 times daily for 10 to 12 weeks, then 1 capsule twice daily for maintenance therapy. Supplied in bottles of 50 capsules.

Linodoxine Capsules

Red capsules containing, in each: linoleic acid, 500 mg.; pyridoxine HCl, 1.4 mg.; and mixed tocopherols (as antioxidant), 7.12 mg., are marketed by *Pfizer Laboratories*, as a companion product to the emulsion form. The capsules are for use in reduction of cholesterol levels in patients already on severely restricted low-fat diets. Dosage, 2–4 capsules 3 times daily before meals. Supplied in bottles of 100 capsules.

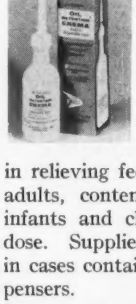
Lufa Capsules

Capsules containing, in each, unsaturated fatty acids, 378 mg. (from safflower seed oil providing approximately 294 mg. linoleic acid); pyridoxine HCl, 2 mg.; choline bitartrate, 233 mg.; methionine, 110 mg.; inositol, 40 mg.; desiccated liver, 87 mg.; B_{12}, 1 mcg.; and E (*dl*-alpha tocopheryl acetate), 3.5 I.U., are marketed by *U. S. Vitamin Corp.* to help modify, prevent or correct hypercholesterolemia and atherosclerosis, especially in diabetic, obese and alcoholic patients. Dosage, 6 to 9 capsules, in divided doses, with meals. Diet: moderate in protein and fats from vegetable sources (more unsaturated fatty acids), and low in cholesterol, hydrogenated and animal (saturated) fats. Supplied in bottles of 100, 500, and 1,000.

Neo-Hydeltrasol Ointment

A topical ointment containing, in each Gm., 5 mg. prednisolone 21-phosphate as sodium salt and 5 mg. neomycin sulfate, is marketed by *Merck Sharp & Dohme*. Supplied in 5-Gm. and 15-Gm. tubes.

Oil Retention Enema



A disposable plastic squeeze bottle, containing 135 cc. mineral oil USP, with an attached prelubricated and protected rectal tube, is marketed by *C. B. Fleet Co.* for use in relieving fecal impactions. Dosage, adults, contents of one enema unit; infants and children, $1/4$ to $1/2$ adult dose. Supplied individually packed or in cases containing 4 dozen 4.5-oz. dispensers.

Optilets-M Filmtab Tablets

Filmtab coated tablets containing, in each: vitamin A 7.5 mg. (25,000 u.), D 25 mcg. (1,000 u.), B_1 (HCl) 10 mg., B_2 5 mg., B_{12} 6 mcg., C 150 mg., nicotinamide 150 mg., folic acid 0.3 mg., Fe 10 mg., Cu 1 mg., I 0.15 mg., Co 0.1 mg., Mn 1 mg., Mg 5 mg., K 5 mg., Zn 1.5 mg. and Mo 0.2 mg., are marketed by *Abbott Laboratories* for therapeutic use. Dosage, 1 or 2 tablets daily. Supplied in bottles of 50, 100, and 1,000 tablets.

Phenylazodiaminopyridine HCl Tablets

Sugar-coated, maroon-colored tablets containing, in each, 100 mg. of phenylazodiaminopyridine HCl are marketed by *West-ward, Inc.* as a urinary analgesic. Supplied in bottles of 100 and 1,000 tablets.

Prednisolone Tablets

Tablets containing, in each, 2.5 mg. or 5 mg. of prednisolone are marketed by *Walker Laboratories* for use as an anti-inflammatory, antirheumatic, antiarthritic, and antiallergenic agent. Both strengths are supplied in bottles of 30, 100 and 1,000.

Prednisone w/Pantothenate Tablets

White multiple-compressed tablets containing, in each: prednisone, 5 mg.; calcium pantothenate, 10 mg.; dried aluminum hydroxide gel, 200 mg.; and magnesium trisilicate, 100 mg., are marketed by *S. E. Massengill Co.* for therapy in rheumatic conditions and to correct associated pantothenic acid deficiency. Supplied in bottles of 30 and 100 tablets.

Salcort-Delta Tablets

Yellow multiple-compressed tablets containing, in each: prednisone, 1 mg.; potassium salicylate, 300 mg.; calcium pantothenate, 5 mg.; calcium ascorbate, 30 mg.; dried aluminum hydroxide gel, 120 mg.; and calcium carbonate, 60 mg., are marketed by *S. E. Massengill Co.* for therapy in rheumatic conditions and to correct associated pantothenic acid deficiency. Supplied in bottles of 100 tablets. See p. 643.

Senokot with Psyllium Powder

A powder containing, in each teaspoonful, the active principles of 450 mg. senna and 1 Gm. psyllium husks is marketed by *The Purdue Frederick Co.* for the treatment and correction of constipation. Oral dosage depends upon the patient's condition. Supplied in 5.5-oz. containers.

Suppoz—New Suppository Form

A new suppository dosage form, in which the medicament for rectal administration is available in a disposable plastic suppository-syringe (Dispository), is marketed by *Taylor Laboratories*. Available Suppoz contain, in each, aspirin 200 mg. (light green), and 300 mg. (green); aspirin 200 mg. + secobarbital sodium 25 mg. (light blue); aspirin 300 mg. + secobarbital sodium 38 mg. (blue); chloral hydrate 500 mg. (light yellow), and 1 Gm. (yellow); pentobarbital sodium 30 mg. (light pink), and 100 mg. (pink).

Synkayvite Ampuls 1 mg., 2.5 mg.

The water-soluble vitamin K analog Synkayvite (menadiol) sodium diphosphate is now marketed in 0.5-cc. ampuls, containing 1 mg. or 2.5 mg. of the drug, by *Roche Laboratories* (new name for pharmaceuticals division of Hoffmann-La Roche Inc.). The new strengths are designed for administration to infants

immediately after birth for prevention of neonatal hemorrhage. Supplied, both strengths in boxes of 12 and 100 ampuls. Synkayvite is available also in ampuls of 5, 10, and 75 mg., and in 5-mg. oral tablets.

Tetrad Tablets

Orange-colored coated tablets containing, in each: pentylenetetrazol, 100 mg.; nicotinic acid, 50 mg.; tetraiodothyronine, 10 mcg.; methyltestosterone, 1 mg.; and ethinyl estradiol, 2 mcg., are marketed as Tetrad (formerly Tetra-Forte) by *E. S. Miller Laboratories* as a psychosomatic restorative-stimulant. Supplied in bottles of 100 and 1,000 tablets.

Tetrex Capsules 100 mg.

Capsules containing, in each, tetracycline phosphate complex equivalent to 100 mg. tetracycline HCl are marketed by *Bristol Laboratories* to supplement the syrup, drops, and intramuscular dosage forms in the pediatric treatment of infections caused by bacteria, rickettsia and certain viruses. Supplied in bottles of 25 and 100. See p. 490.

Tetrex-APC w/Bristamin Capsules

Capsules containing, in each, tetracycline phosphate equivalent to tetracycline HCl, 125 mg.; phenyltoloxamine (Bristamin) citrate, 25 mg.; aspirin, 150 mg.; phenacetin, 120 mg.; and caffeine, 30 mg., are marketed by *Bristol Laboratories* for use to relieve the symptoms and prevent or treat complications of respiratory infections. Dosage, 1 or 2 capsules 4 times daily. Supplied in bottles of 24.

Theragran Junior Capsules

E. R. Squibb & Sons have marketed their Theragran vitamin formula in smaller capsules for children who require vitamins commonly associated with mixed deficiencies. Dosage 1 or more capsules daily. Supplied in bottles of 30 and 100.

Thorazine Spansule Capsules

Smith, Kline & French have made their tranquilizer-antiemetic Thorazine (chlorpromazine) available in sustained release Spansule form in 30-mg., 75-mg., 150-mg., and 200-mg. capsules. All 4 strengths have the same duration of action (10-12 hrs.) and differ only in intensity of effect. All strengths are available in bottles of 30 and 250. See p. 581.

Tricofuron Vaginal Powder—New Package

Eaton Laboratories have marketed their vaginal powder, containing Furoxone (furazolidone) 1%, in a plastic "puffer" bottle for insufflation in vaginal trichomoniasis.

Tussionex Tablets
Tussionex Liquid

Brown scored tablets and a flavored golden liquid containing in each tablet and each 5 cc., respectively, 5 mg. dihydrocodeinone and 10 mg. phenyltoloxamine as their resin complexes, are marketed by *R. J. Strasenburgh Co.* for sustained antitussive action. Dosage, 1 tablet or 1 teaspoonful (5 cc.) every 8 to 12 hours. Supplied in bottles of 100 tablets and in pints of liquid suspension. A class B narcotic, on oral prescription where state law permits.

Viacets Candispheres

Candy balls in 5 fruit flavors and 5 colors and containing, in each, vitamins A, D, E, C, B_1, B_{12}, B_6, riboflavin, calcium pantothenate, and folic acid, are marketed by *Walker Laboratories* as a nutritional supplement taken 1 or 2 daily. Supplied in bottles of 120.

Vitakaps-M Filmtab Tablets

Filmtab coated tablets containing, in each: vitamin A 1.5 mg., D 12.5 mcg., B_1(nitrate) 3 mg., B_2 2.5 mg., B_6 0.5 mg., B_{12} 2 mcg., C 50 mg., nicotinamide 20 mg., folic acid 0.25 mg., Ca pantothenate 5 mg., Fe 10 mg., Cu 1 mg., I 0.15 mg., Co 0.1 mg., Mn 1 mg., Mg 5 mg., K 5 mg., Zn 1.5 mg., and Mo 0.2 mg., are marketed by *Abbott Laboratories* as a nutritional supplement when taken one a day, and for therapy in larger doses. Supplied in bottles of 50, 100, and 250 tablets.

Vio-Dex Timelets Tablets

Sugar-coated tablets containing 10 mg. (orange) or 15 mg. (brown) of *d*-amphetamine sulfate in the outer layer of each tablet and, in each enteric layered core, phenobarbital, 32 mg.; vitamin A, 5,000 u.; D, 1,200 u.; B_1, 3 mg.; B_2, 3 mg.; B_6, 1 mg.; C, 100 mg.; E, 1 u.; *d*-calcium pantothenate, 2 mg.; and niacinamide, 20 mg., are marketed by *Rowell Laboratories* for sustained release appetite control in the treatment of obesity, weight control during pregnancy, nonorganic neurasthenia and depressive states associated with convalescence, menopause, old age, alcoholism, etc. Dosage, 1 tablet on arising. Supplied in the 10-mg. or 15-mg. form in bottles of 100, 250, and 1,000.

Zymabasic Drops

A watery-thin, room-stable, citrus-flavored liquid containing, in each 0.6-cc. daily dose: vitamin A 500 units, D 1,000 units, C 50 mg., and B_6 1 mg., is marketed by *The Upjohn Co.* as an aid in the prevention or correction of nutritional deficiencies in infants and children. The 0.6-cc. dose can be dropped into the mouth or mixed with milk or water. Supplied in bottles of 15, 30, and 50 cc. with calibrated dropper.

Vitamin B_{12} Tablets 50 mcg.

Tablets containing, in each, 50 mcg. B_{12} (as cobalamin concentrate N.F.) are marketed by *West-ward, Inc.* as a nutritional aid for chronically ill and malnourished adults and children. Supplied in bottles of 100 and 1,000 tablets.

Communicable Diseases Summary

THE number of cases of the communicable diseases shown in the table below are based on reports by Health Officers of each State and of Alaska, Hawaii, and Puerto Rico to the National Office of Vital Statistics of the Department of Health, Education, and Welfare, Washington, D.C. The number of cases of each disease occurring during each of the last 4 weeks are reported and also cumulative totals to date for 1957 and for the corresponding period of 1956, as well as the 1952–1956 median for this same period. The approximate seasonal low point for each of the diseases is shown in the last column.

Communicable Disease	Cases Reported for Week Ending				Cumulative Number			Low Point
Selected Notifiable Disease	*Sept. 21, 1957*	*Sept. 28, 1957*	*Oct. 5, 1957*	*Oct. 12, 1957*	*First 41 weeks 1957*	*1956*	*Median 1952–1956*	*(Approximate Seasonal)*
Anthrax	1[a]	—	—	—	16	34	24	[b]
Botulism	—	—	—	—	11	5	8	[b]
Brucellosis (undulant fever)	15	14	25	27	783	848	1,349	[b]
Diphtheria	33	23	29	25	774	1,090	1,409	July 1
Encephalitis, infectious	40	67	36	44	1,486	1,751	1,555	June 1
Hepatitis, infectious, and serum	237	224	227	202	12,393	15,720	25,547	Sept. 1
Malaria	3	5	5	3	129	203	582	[b]
Measles	862	911	818	1,109	455,204	582,130	582,130	Sept. 1
Meningococcal infections	42	25	44	51	1,917	2,175	3,408	Sept. 1
Meningitis, other	41	59	57	41	1,898	1,218	---	---
Poliomyelitis	213	231	211	169	5,231	13,148	29,564	Apr. 1
Paralytic	82	105	103	88	1,167	5,636	---	Apr. 1
Nonparalytic	94	95	63	64	2,626	5,150	---	Apr. 1
Unspecified	37	31	45	17	838	2,362	---	Apr. 1
Psittacosis	7	1	3	1	206	430	216	[b]
Rabies in man	—	—	—	—	4	7	7	[b]
Typhoid fever	26	31	42	48	1,085	1,495	1,828	Apr. 1
Typhus fever, endemic	4	3	2	2	102	88	142	Apr. 1

[a] Reported in Mass. [b] Data show no pronounced seasonal change in incidence. Symbols: 1 dash (—): no cases reported; 3 dashes (---): data not available.

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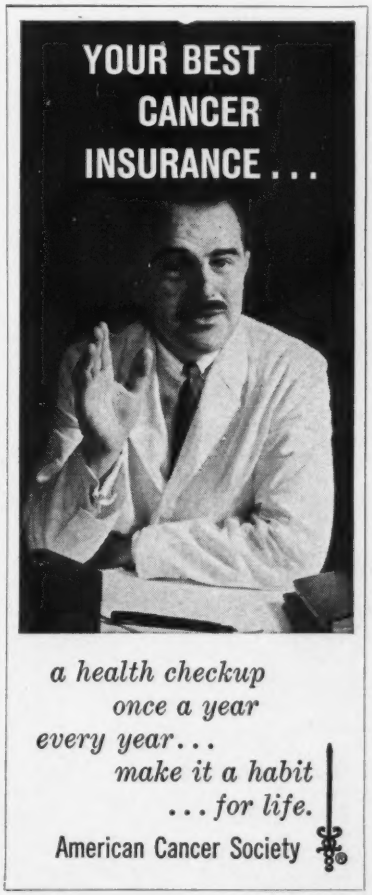

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